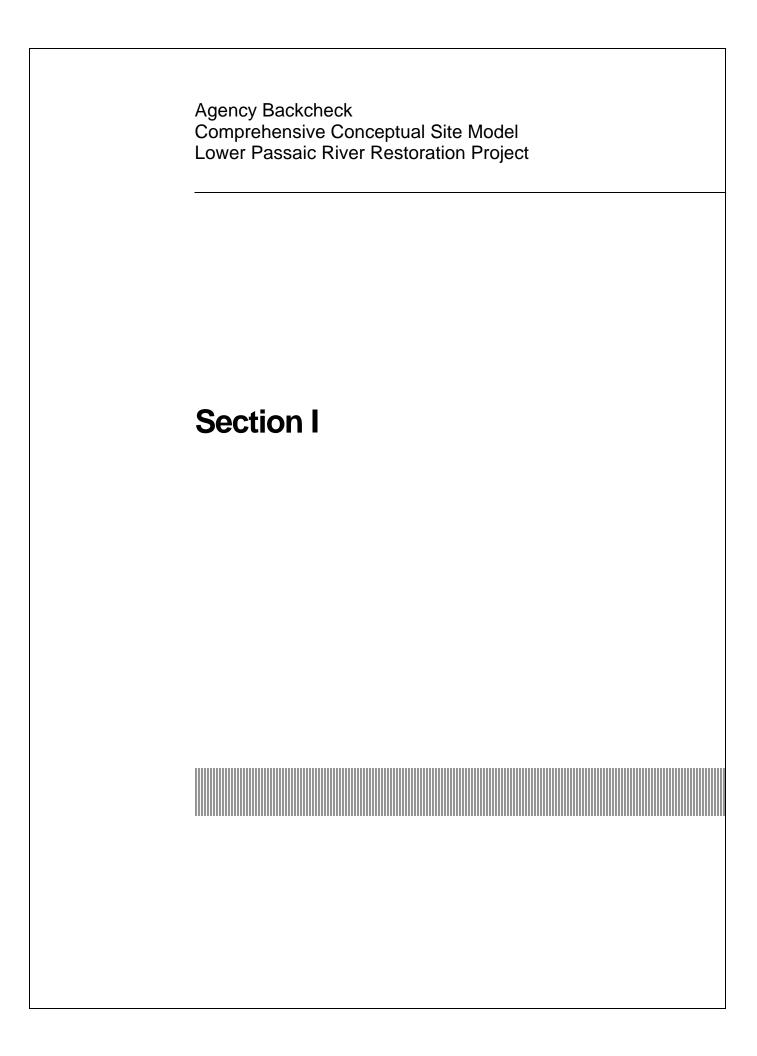
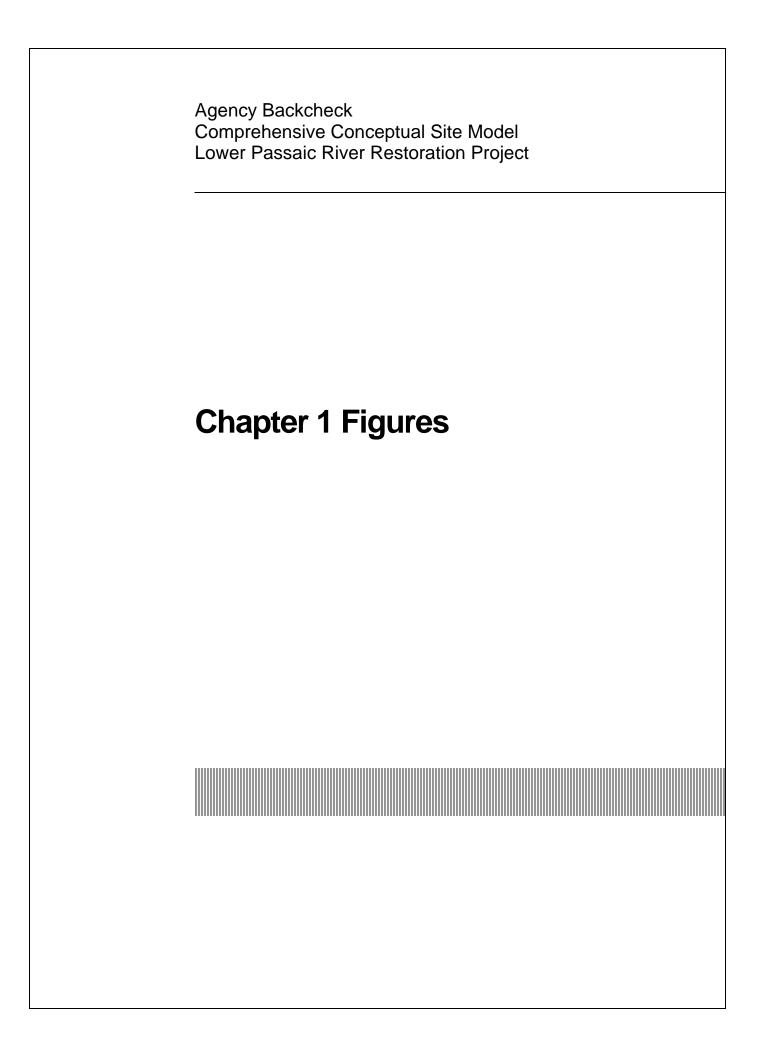
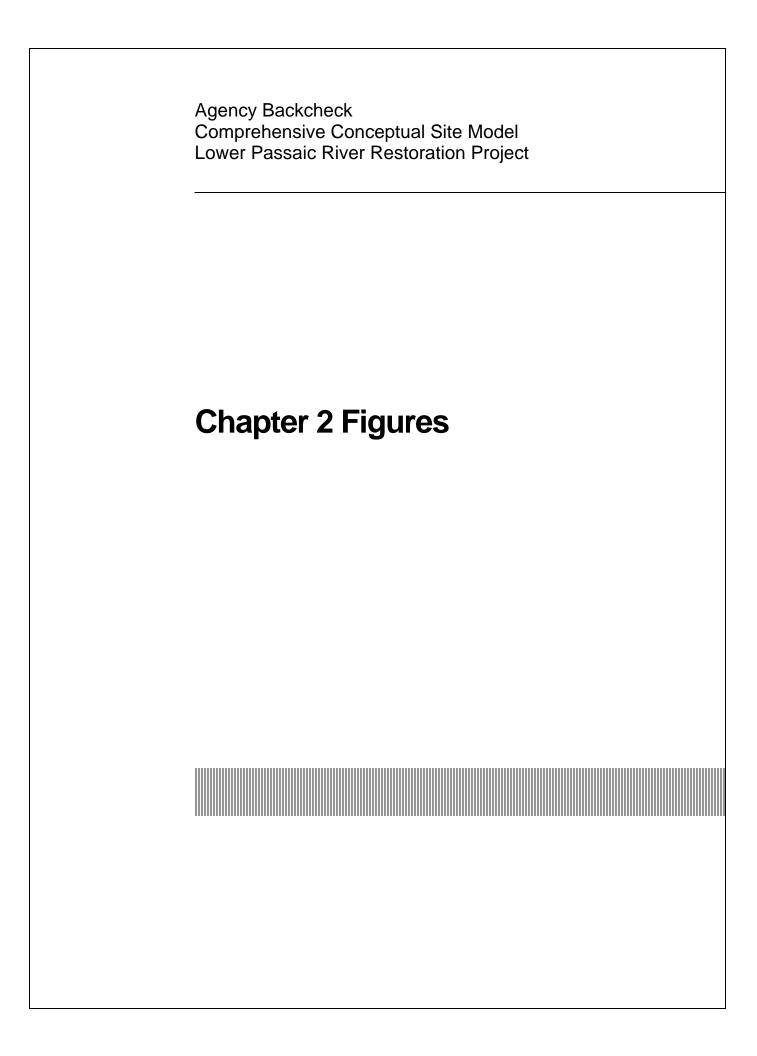
Agency Backcheck Comprehensive Conceptual Site Model Lower Passaic River Restoration Project **Figures**

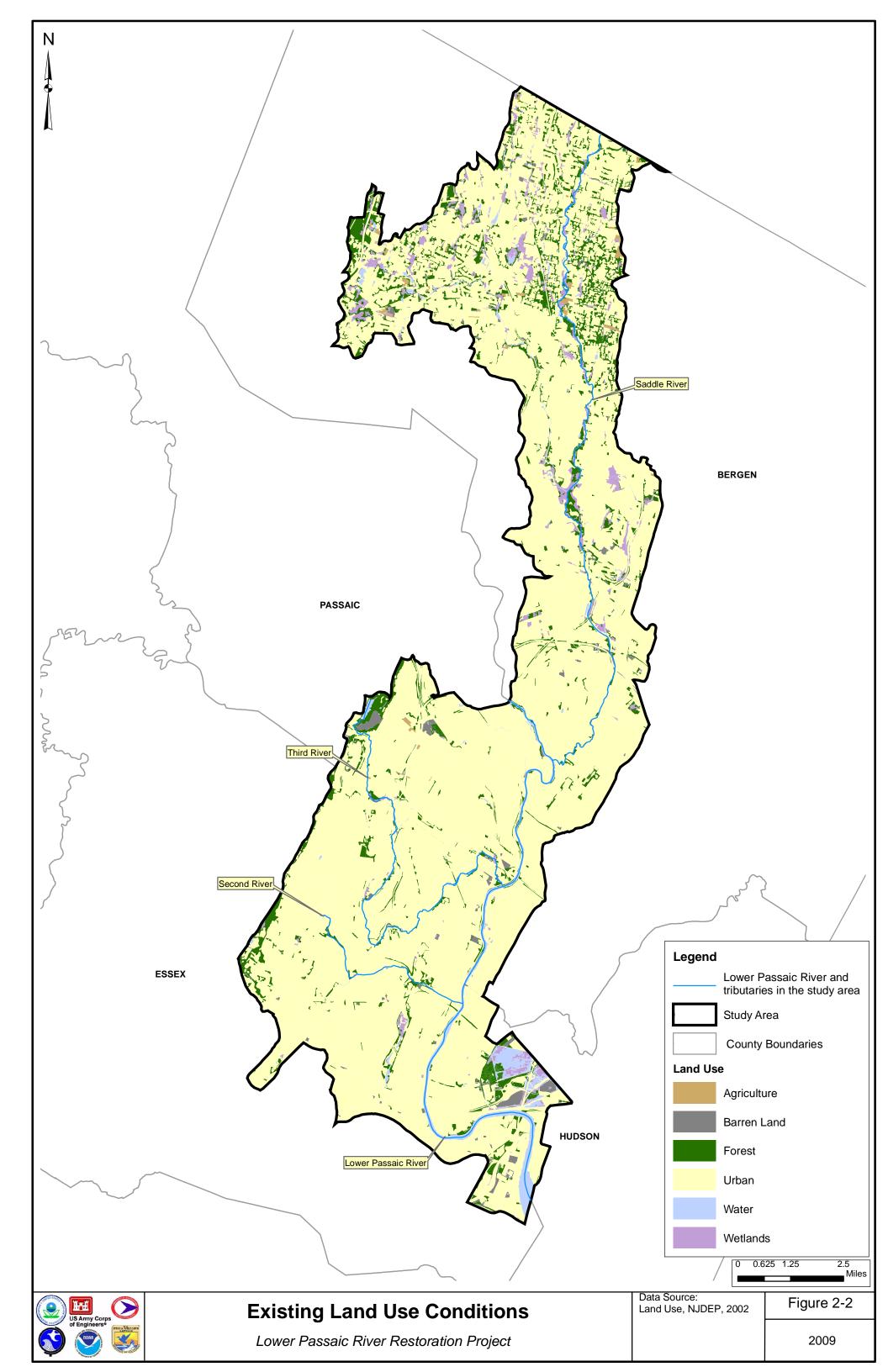


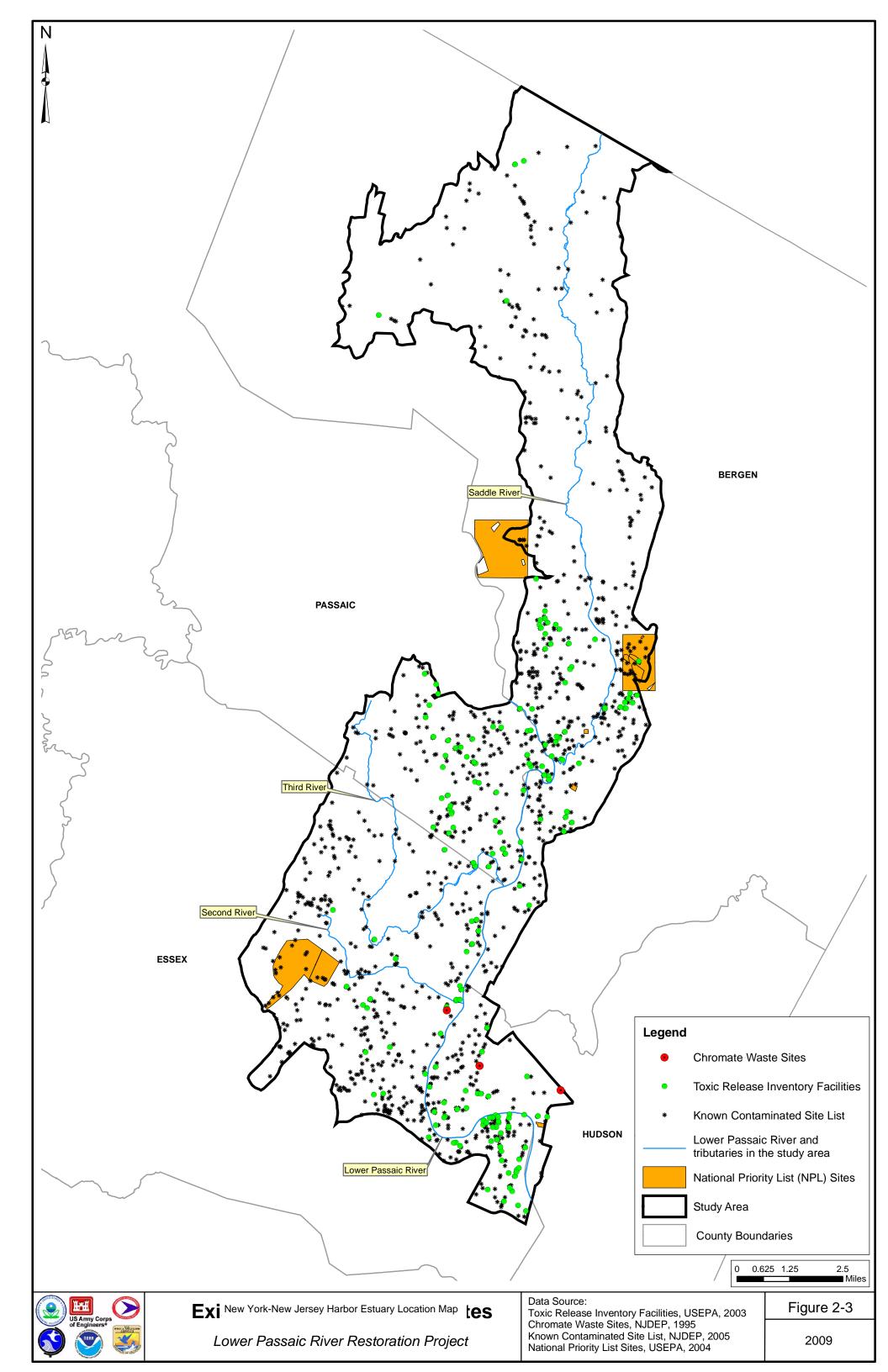


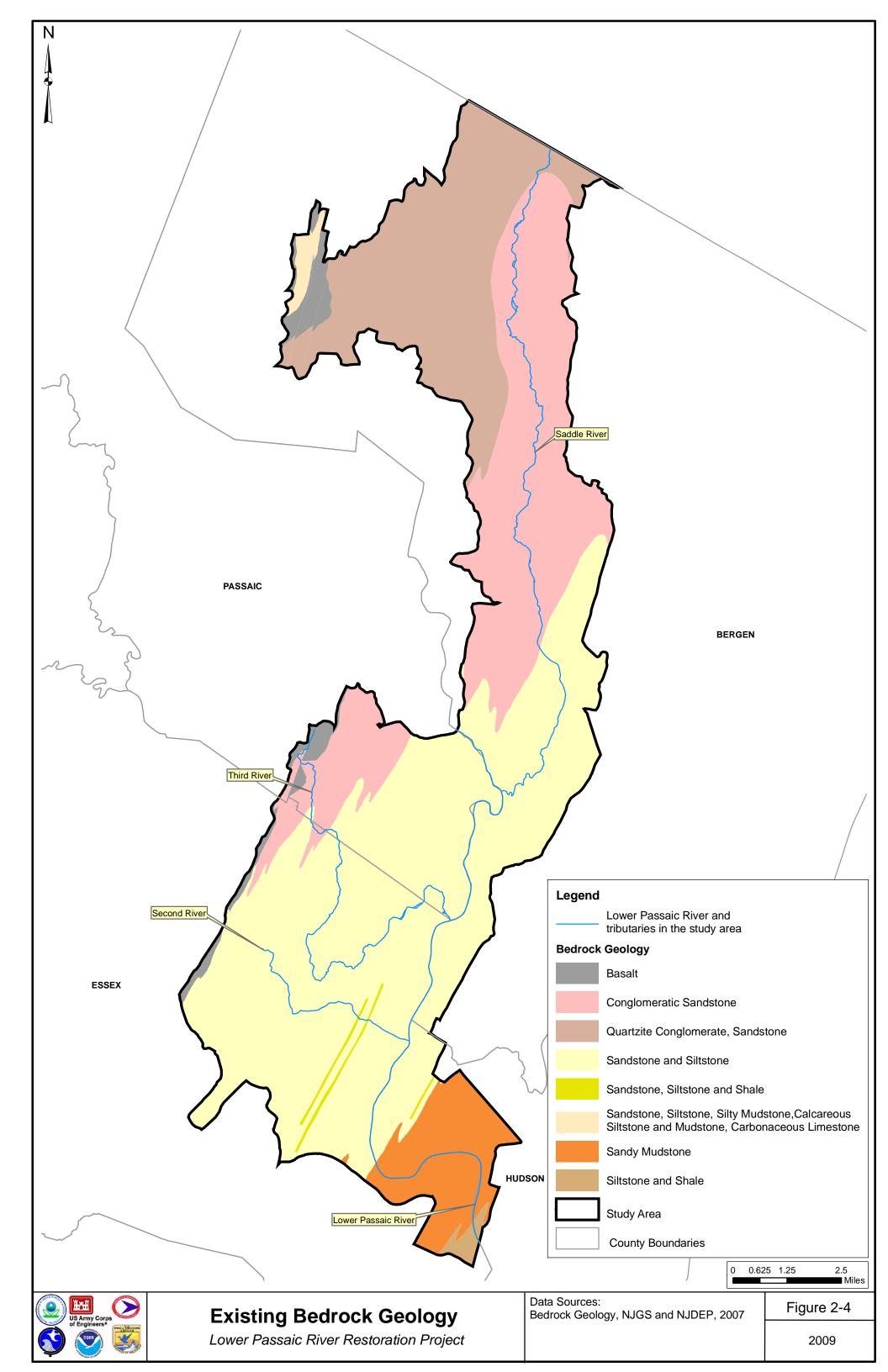
Document: (S:/Projects/PASSAIC/MapDocuments/4622001-W/RDA/MXD/FSP2_033106/MXDS/introduction/site location_CSM.mxd)

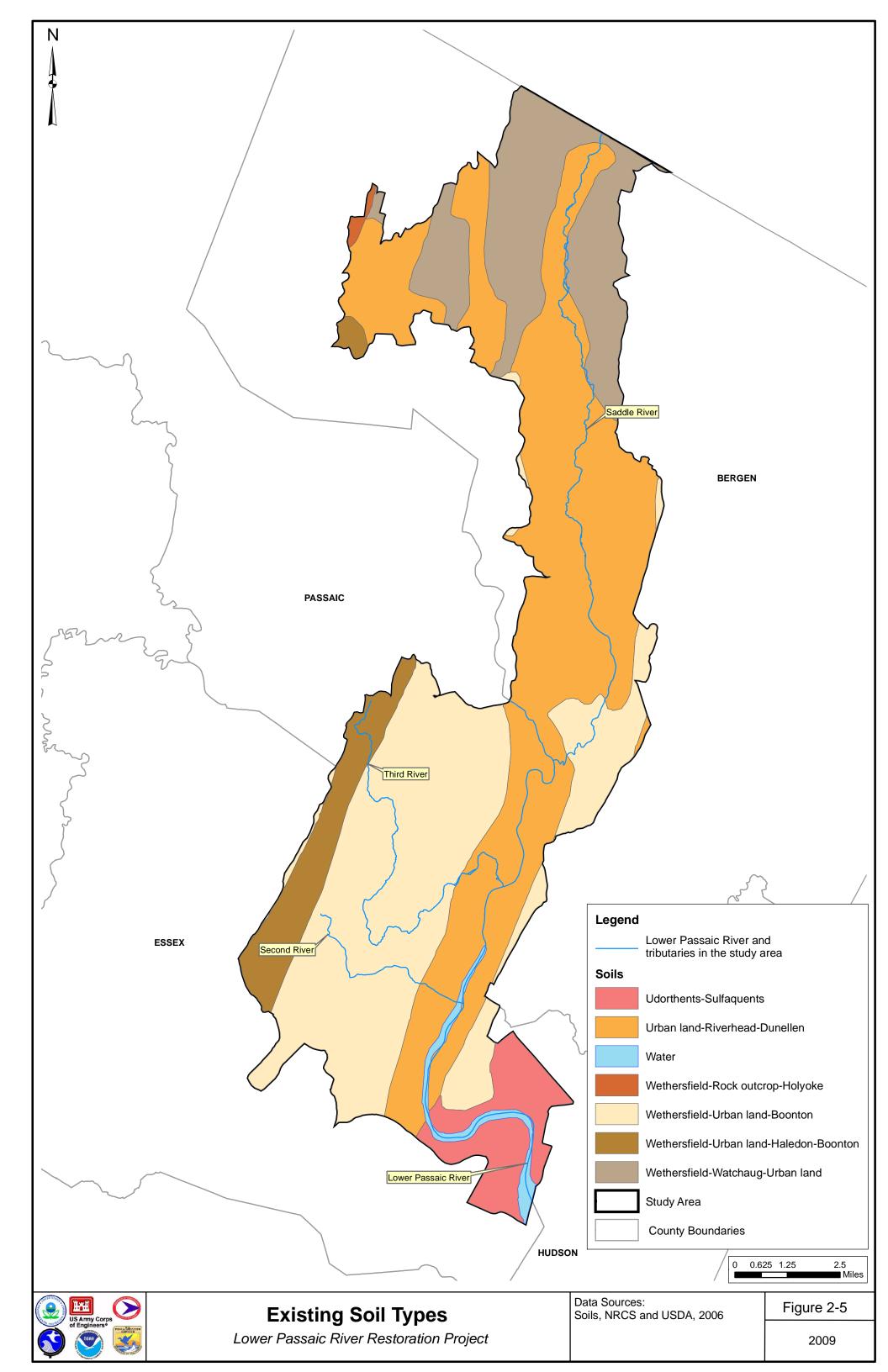


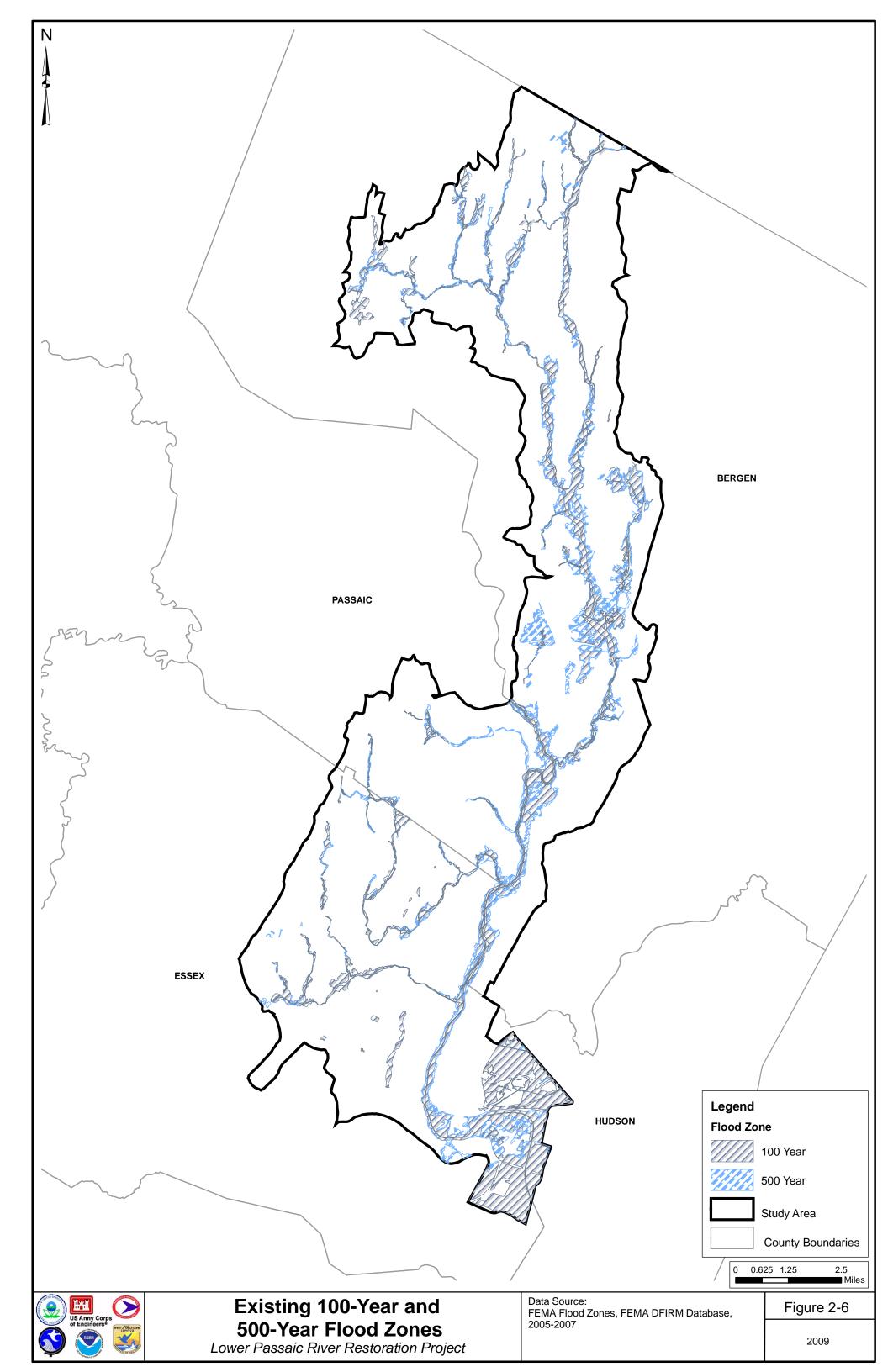














2004-2005 Field Reconnaissance at Kearny Point (looking south/southwest)



2004-2005 Field Reconnaissance at RM2.3



2004-2005 Field Reconnaissance at RM1.9 (looking southwest at Pulaski Skyway)



November 2006 Site Visit at RM2.3 (looking east at Point No Point Bridge)



Lower Passaic River Restoration Project

Figure 2-7a



November 2006 Site Visit at RM2.4 (looking north at NJ Turnpike Bridge)



November 2006 Site Visit at RM3.1 (looking south)



November 2006 Site Visit at RM2.6 (looking south)



November 2006 Site Visit at RM3.2 (looking south)



Lower Passaic River Restoration Project

Figure 2-7b



November 2006 Site Visit at RM3.4 (looking southwest)



November 2006 Site Visit at RM3.5 (looking southwest)



November 2006 Site Visit at RM3.5 (looking east)



November 2006 Site Visit at RM4.5 (looking northeast at Jackson Street Bridge)



Lower Passaic River Restoration Project

Figure 2-7c



November 2006 Site Visit at RM5 (looking southwest)



November 2006 Site Visit at RM6 (looking east)



November 2006 Site Visit at RM5.4 (looking north at Bridge Street Bridge)



2004-2005 Field Reconnaissance at RM6.2 (looking east)



Lower Passaic River Restoration Project

Figure 2-7d



2004-2005 Field Reconnaissance at RM6.9 (looking east)



2004-2005 Field Reconnaissance at RM7.2 (looking east)



2004-2005 Field Reconnaissance at RM7.2 (looking east)

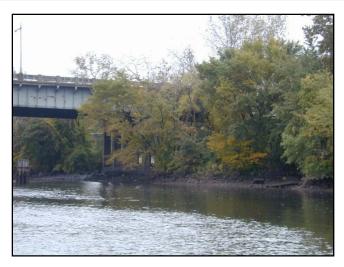


2004-2005 Field Reconnaissance at RM7.4 (looking east)



Lower Passaic River Restoration Project

Figure 2-7e



2004-2005 Field Reconnaissance at RM7.8 (looking east at Belleville Turnpike Bridge)



2004-2005 Field Reconnaissance at RM9.4 (looking east)



2004-2005 Field Reconnaissance at RM8.3 (looking east)



2004-2005 Field Reconnaissance at RM9.4 (looking east)



Lower Passaic River Restoration Project

Figure 2-7f



2004-2005 Field Reconnaissance at RM9.6 (looking east)



2004-2005 Field Reconnaissance at RM10.1 (looking east)



2004-2005 Field Reconnaissance at RM9.8 (looking east)



November 2006 Site Visit at RM10.4 (looking north at De Jesse Street Bridge)



Lower Passaic River Restoration Project

Figure 2-7g



2004-2005 Field Reconnaissance at RM10.7 (looking east)



2004-2005 Field Reconnaissance at RM11.7 (looking east)



2004-2005 Field Reconnaissance at RM11.5 (looking east)



2004-2005 Field Reconnaissance at RM12.8 (looking west)



Lower Passaic River Restoration Project

Figure 2-7h



2004-2005 Field Reconnaissance at RM12.9 (looking east)



2004-2005 Field Reconnaissance at RM14.2 (looking east)



2004-2005 Field Reconnaissance at RM12.9 (looking east)



2004-2005 Field Reconnaissance at RM14.3



Lower Passaic River Restoration Project

Figure 2-7i



November 2006 Site Visit at RM15.8 (looking south at Passaic Street Bridge)



November 2006 Site Visit at RM15.9 (looking north at Monroe Street Bridge)



2004-2005 Field Reconnaissance at RM15.9 (looking north at Monroe Street Bridge)



2004-2005 Field Reconnaissance at RM15.9 (looking northeast)



Lower Passaic River Restoration Project

Figure 2-7j



November 2006 Site Visit at RM15.9 (looking northeast)



2004-2005 Field Reconnaissance at Island at RM16.5 (looking west)



2004-2005 Field Reconnaissance at RM16



2004-2005 Field Reconnaissance at RM16.5 (looking east from road)



Lower Passaic River Restoration Project

Figure 2-7k



2004-2005 Field Reconnaissance at RM17.2 (looking east)



2004-2005 Field Reconnaissance at RM17.4 (near Dundee Dam)



2004-2005 Field Reconnaissance at RM17.2

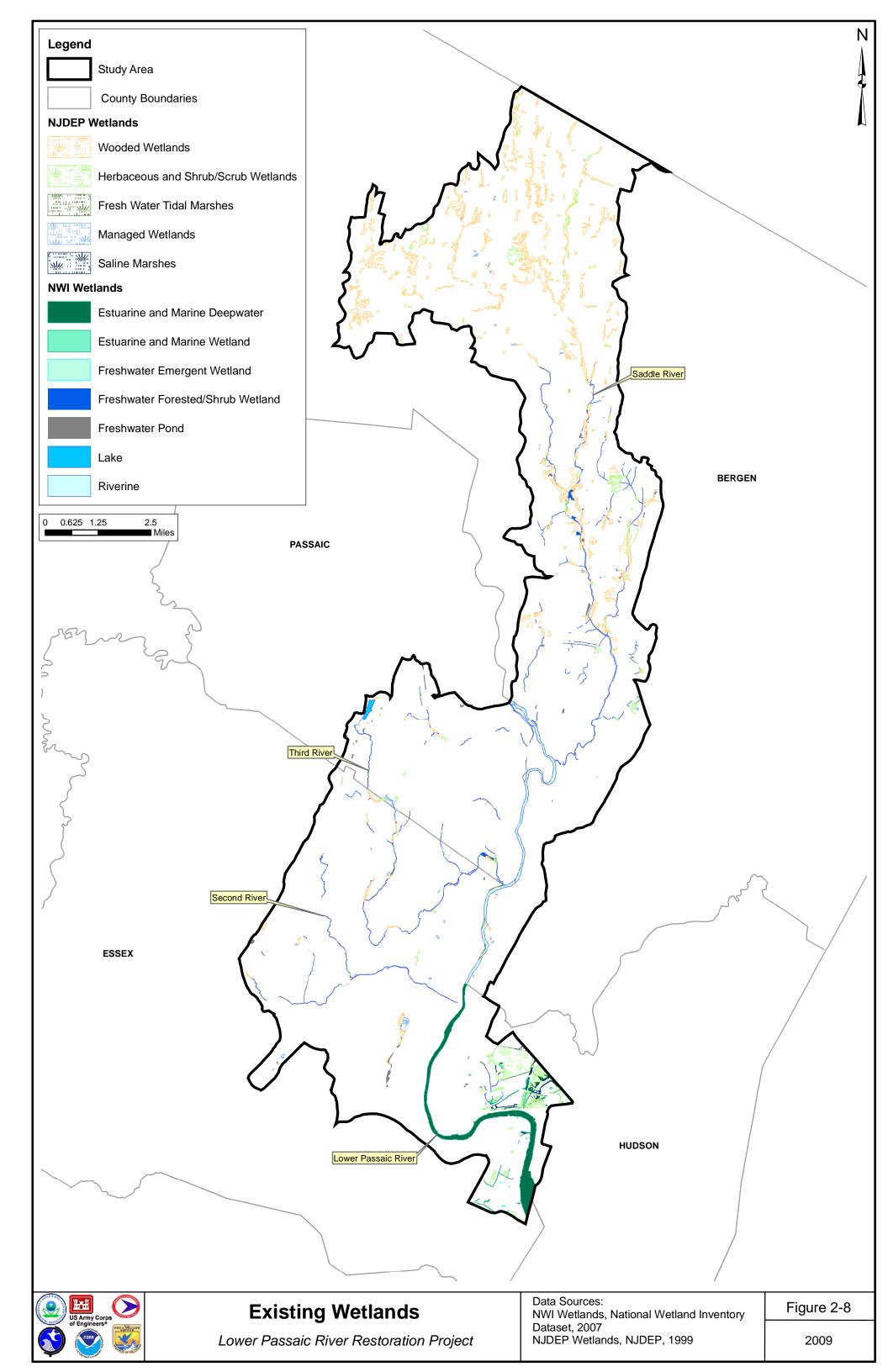


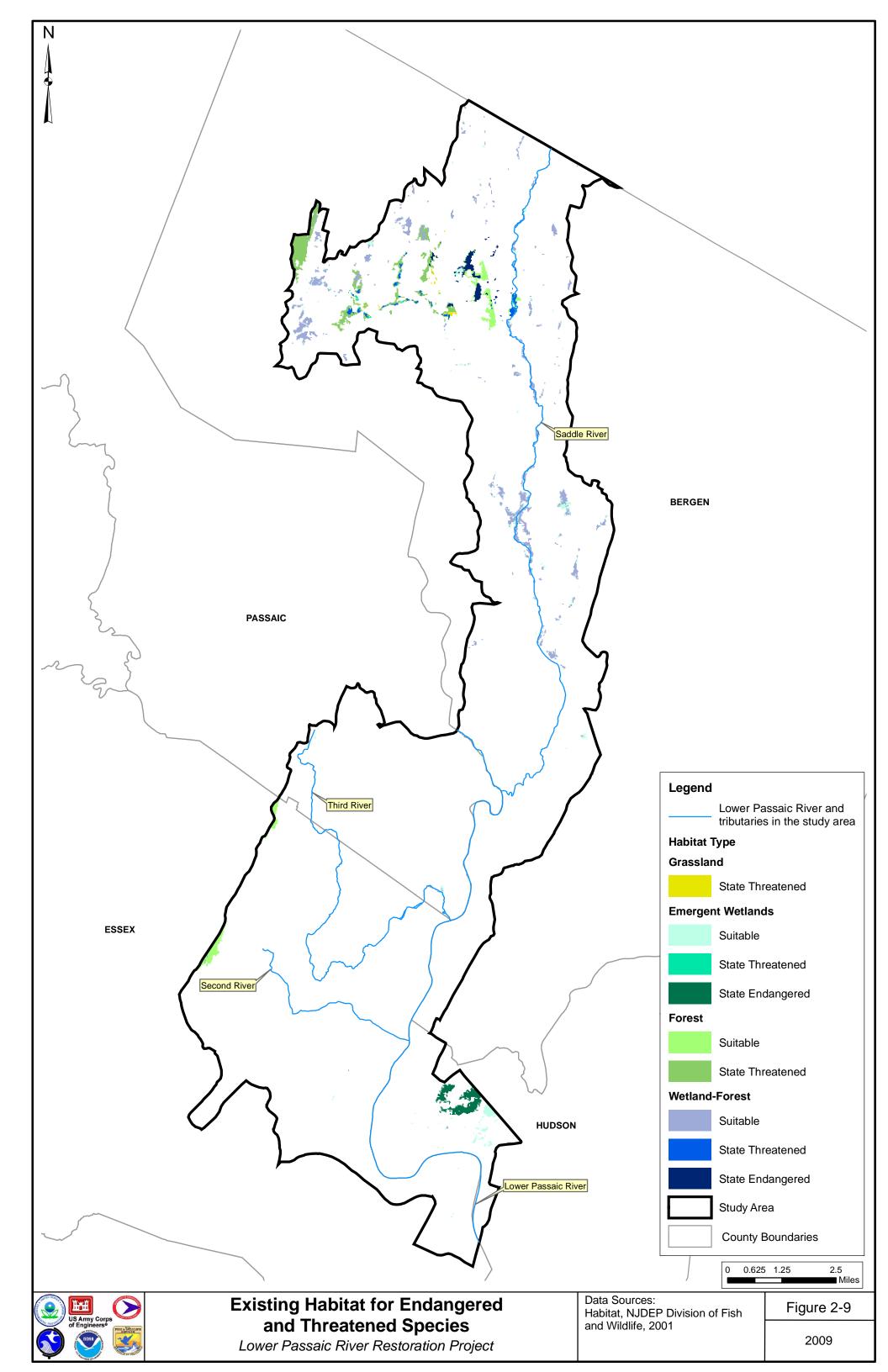
2004-2005 Field Reconnaissance at RM 17.4 (near Dundee Dam)

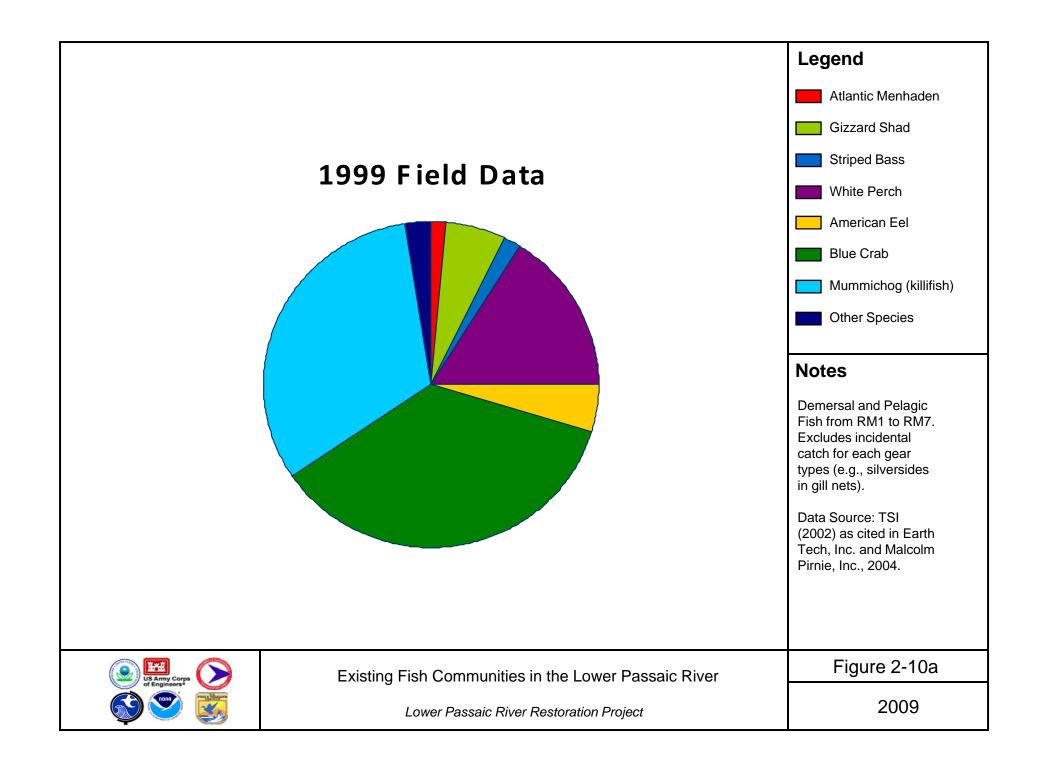


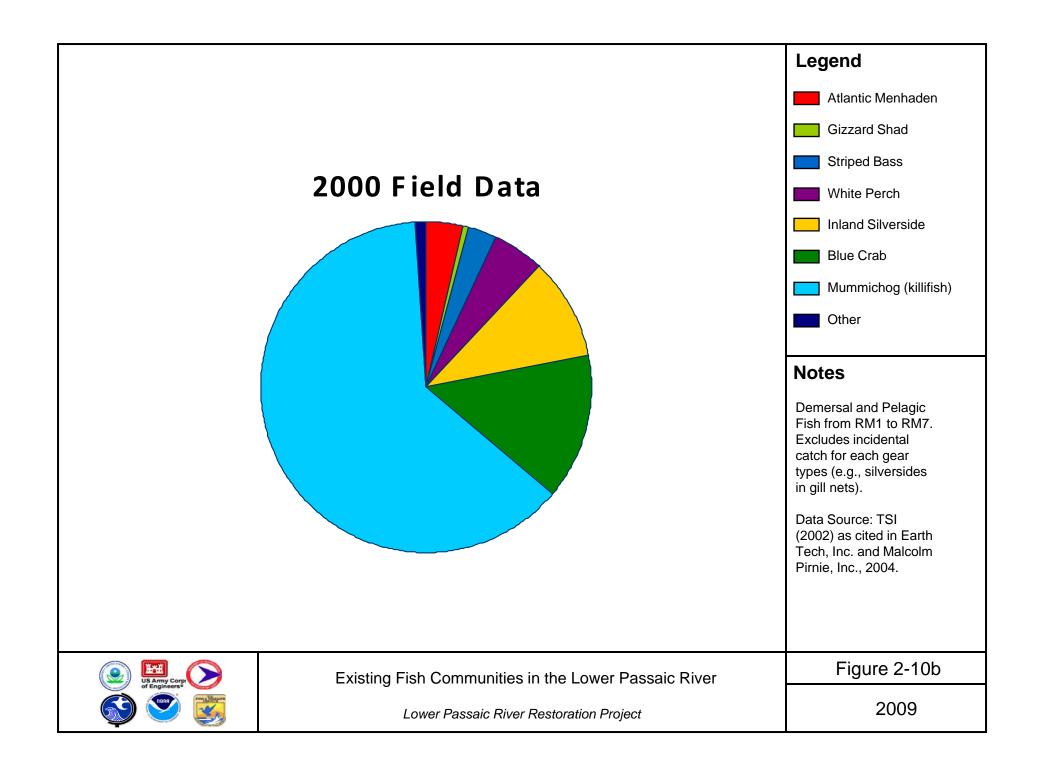
Lower Passaic River Restoration Project

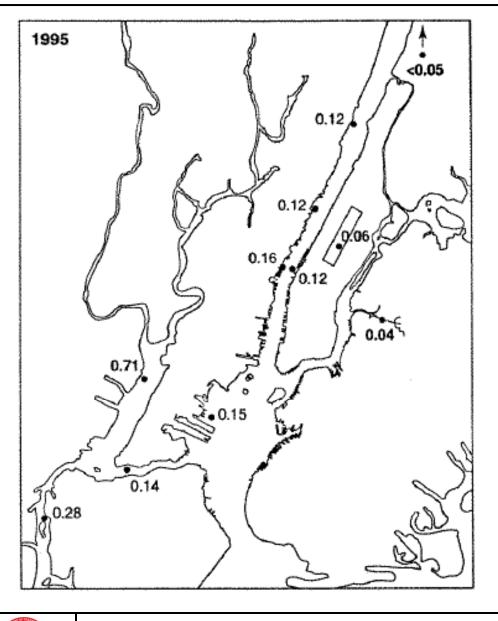
Figure 2-7I











Legend

• 2,3,7,8-TCDD/Total TCDD Ratio

Notes

Chaky DA, 2003.

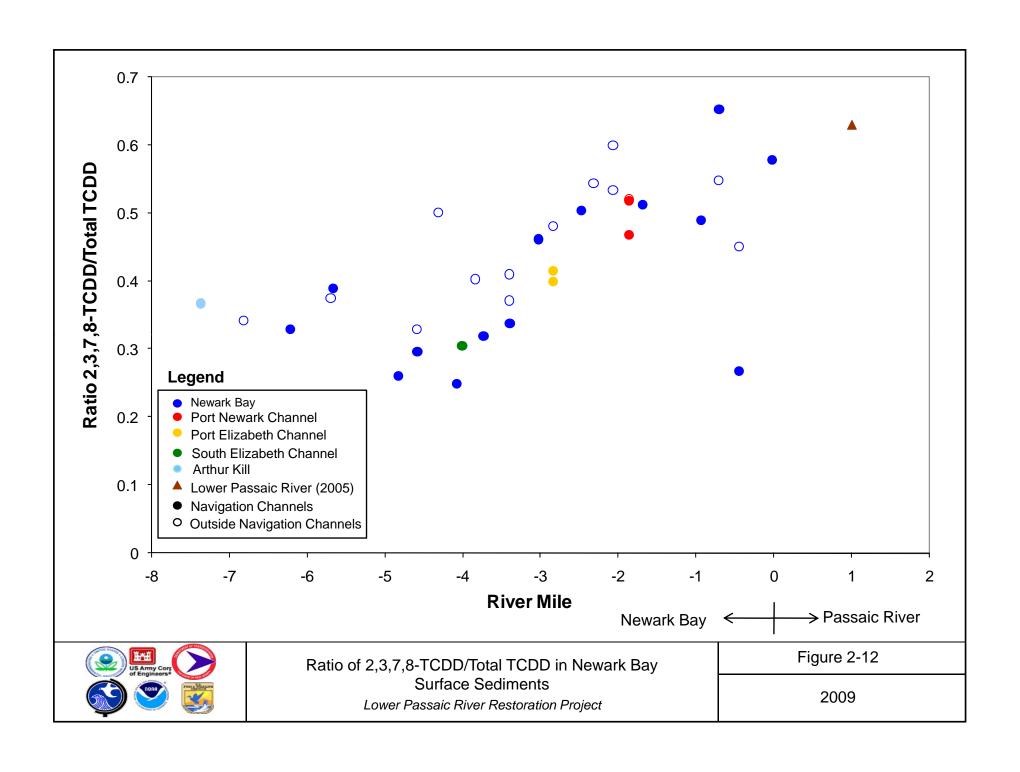
"Polychlorinated Biphenyls,
Polychlorinated Dibenzo-pDioxins and Furans in the New
York Metropolitan Area;
Interpreting Atmospheric
Deposition and Sediment
Chronologies." PhD Thesis,
Rensselaer Polytechnic
Institute, Troy, NY. August
2003.

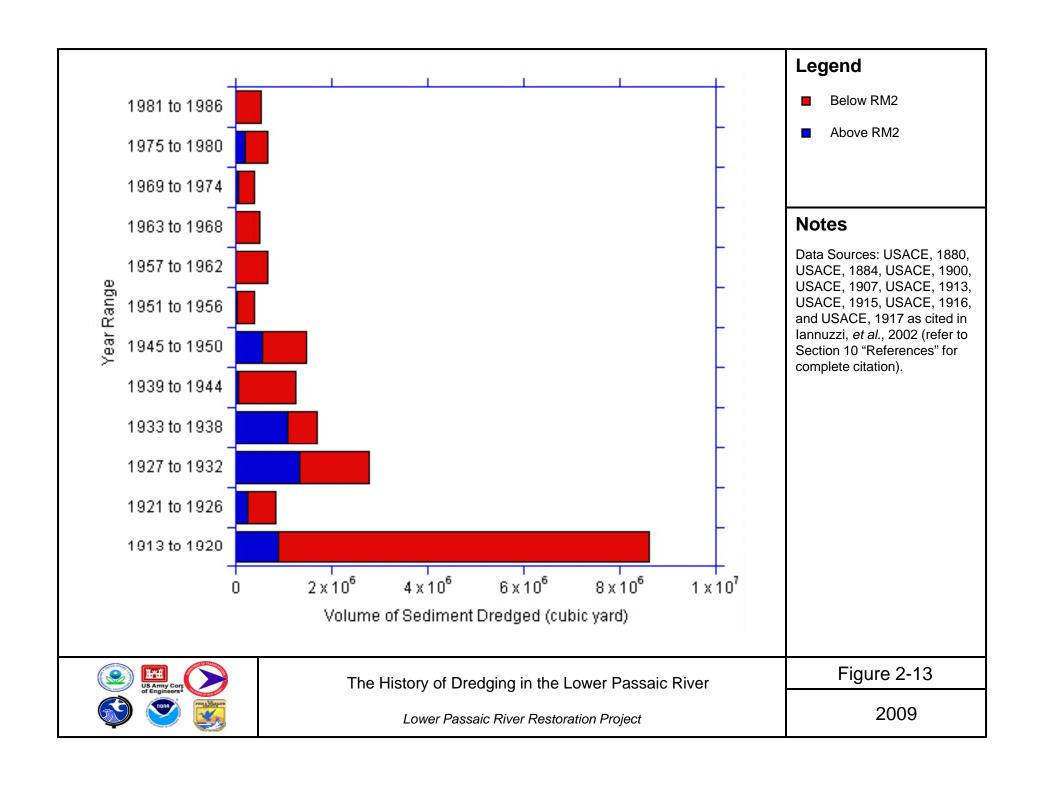


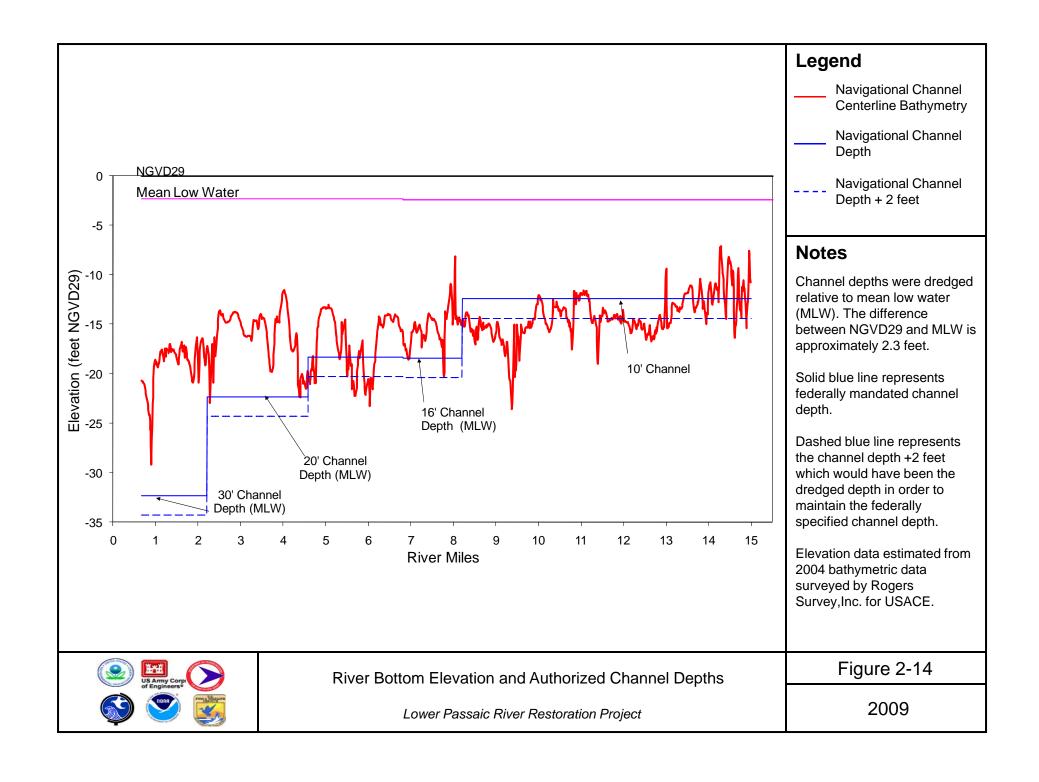
Reprint from Chaky (2003): Ratio of 2,3,7,8-TCDD/Total TCDD in the Hudson-Raritan Estuary in 1995

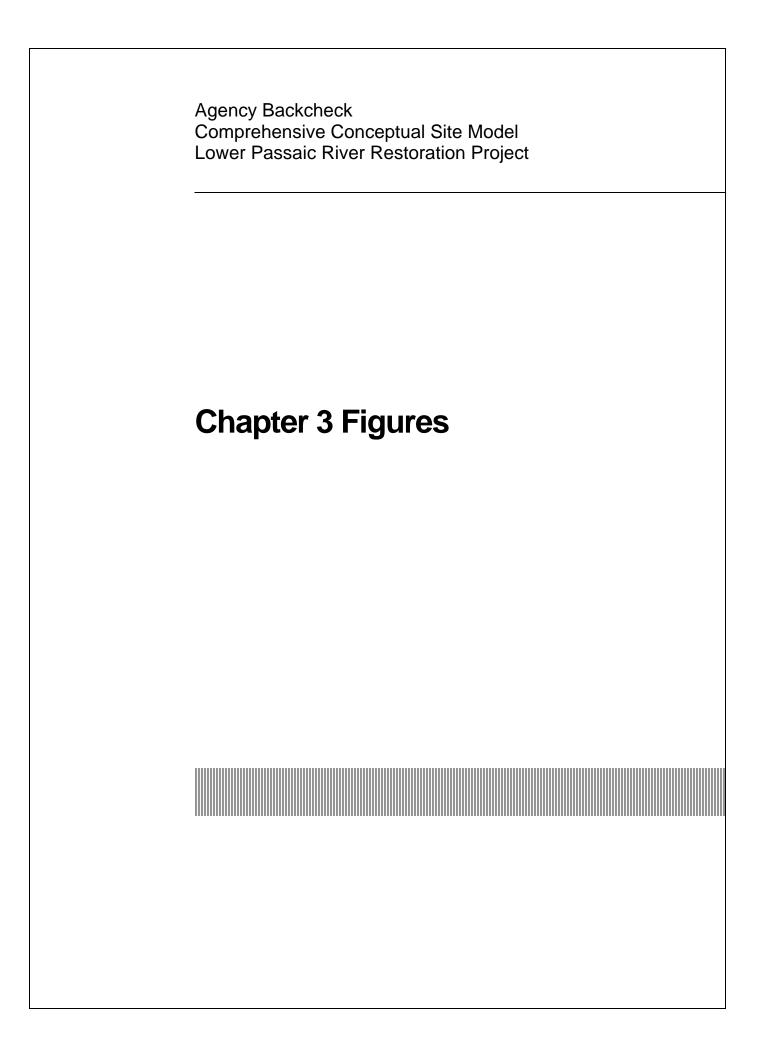
Lower Passaic River Restoration Project

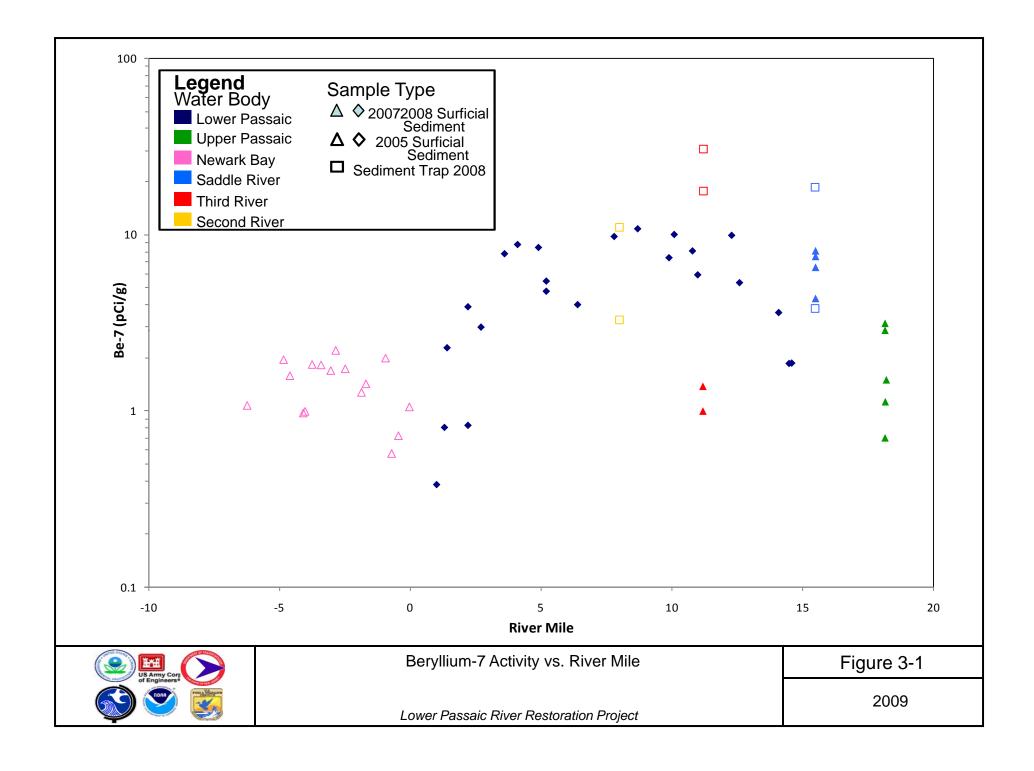
Figure 2-11

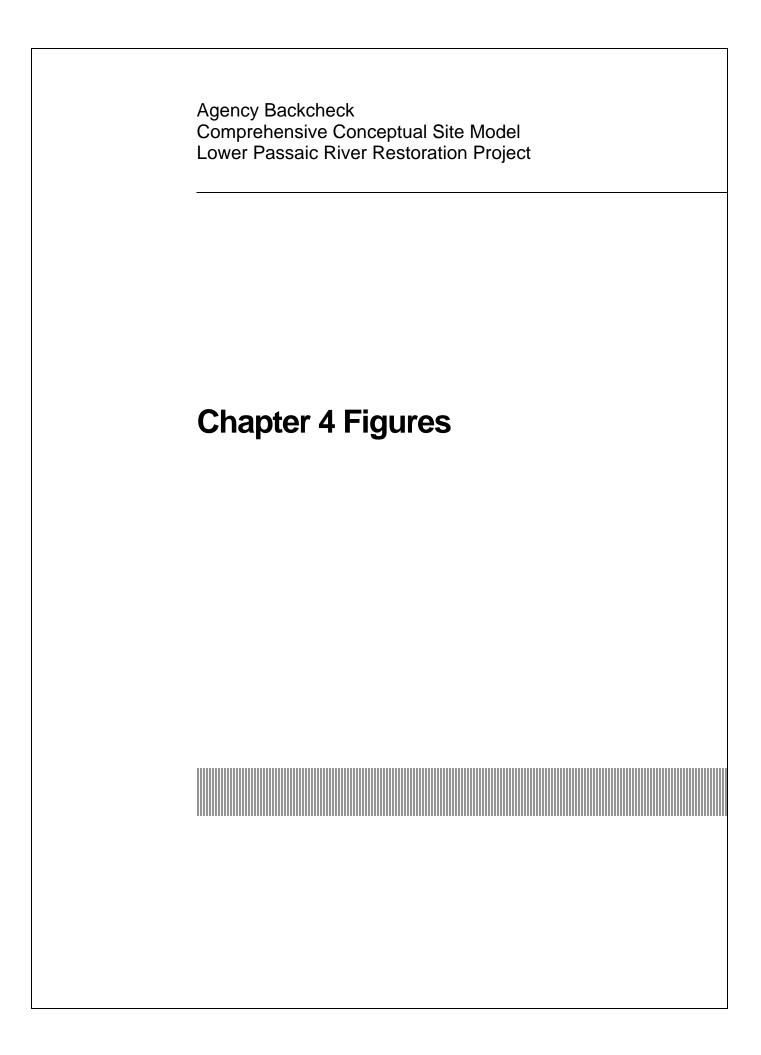


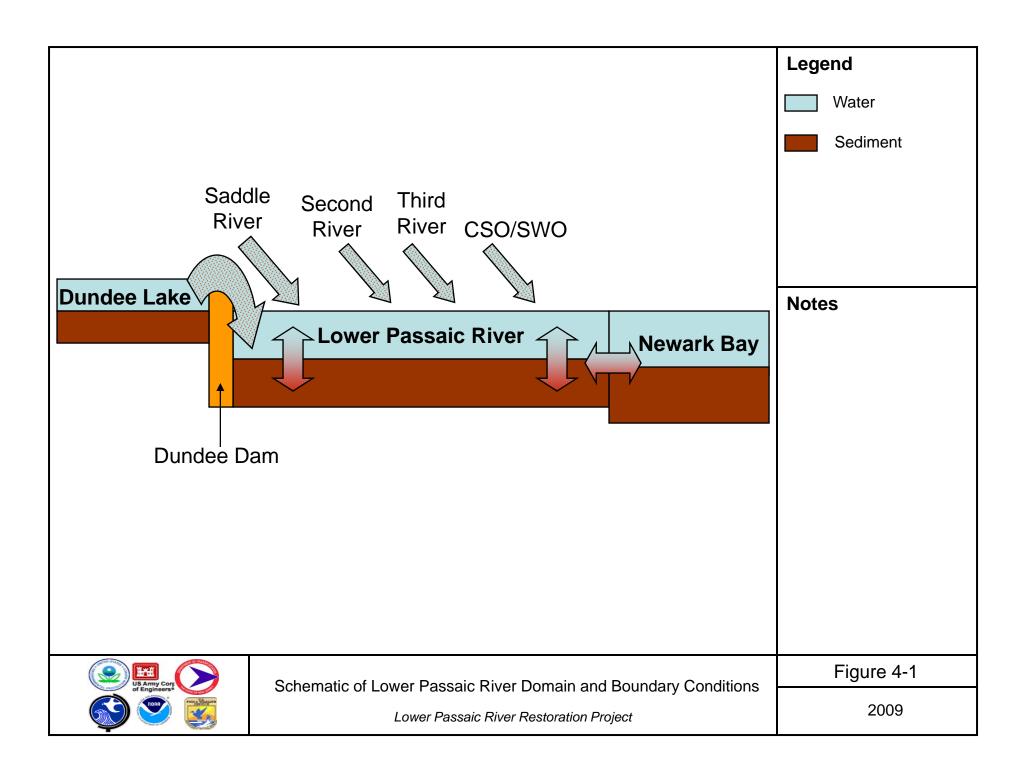


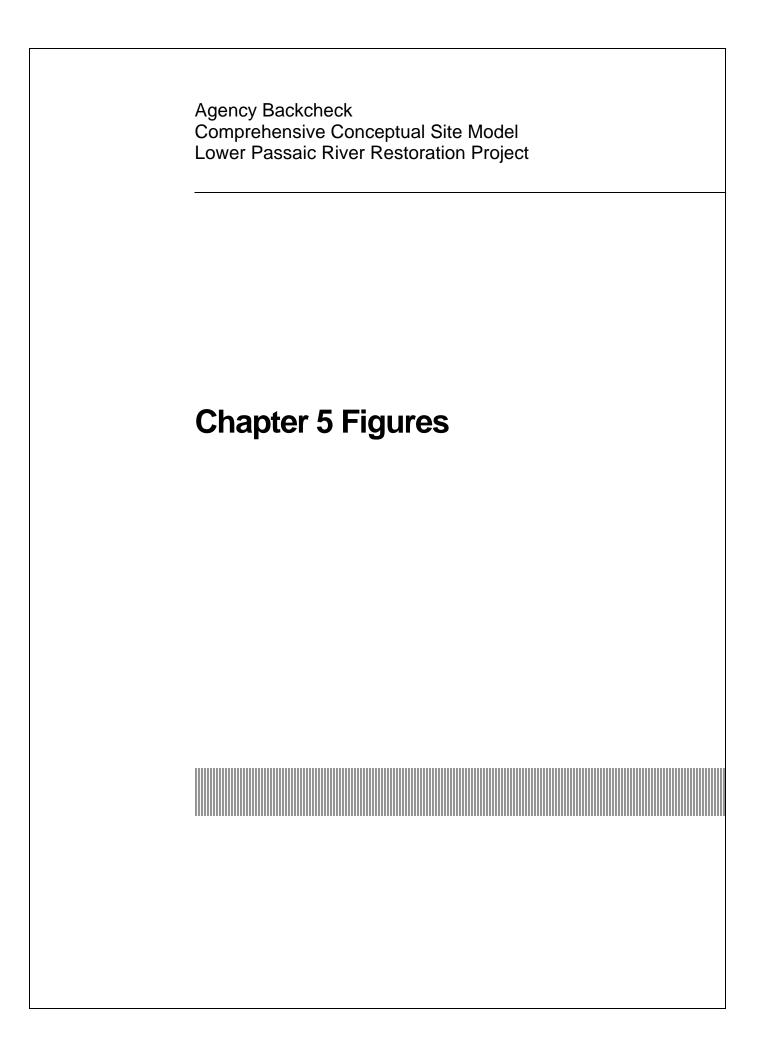


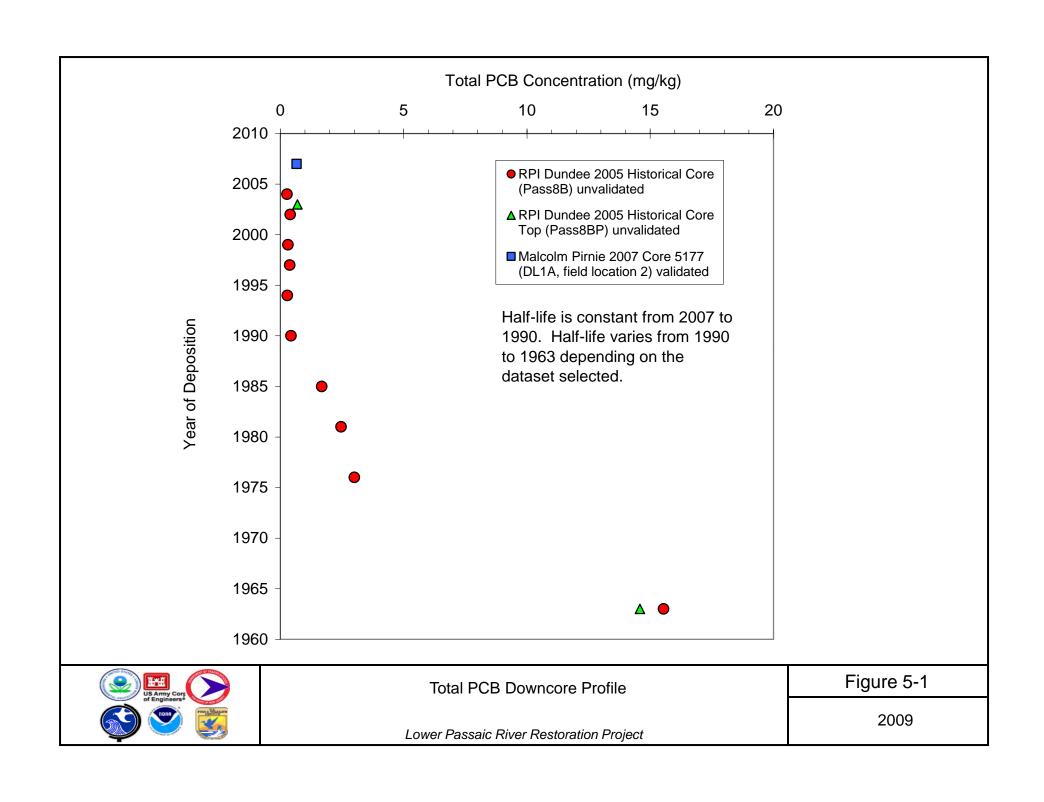


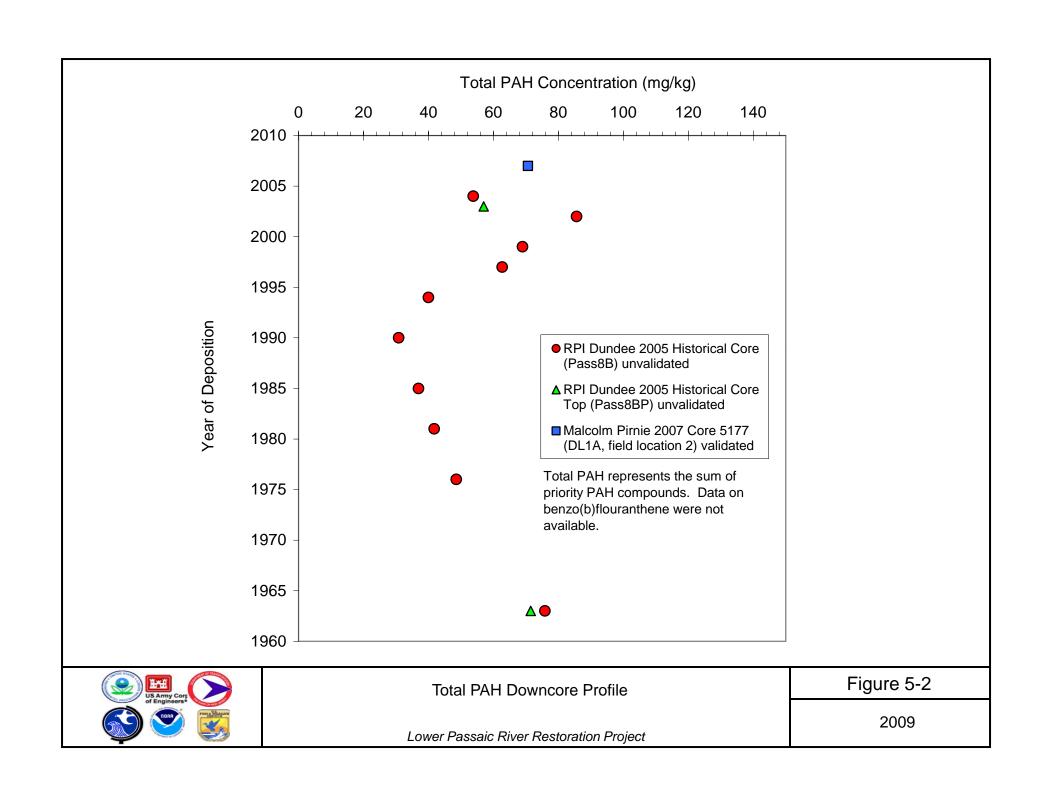


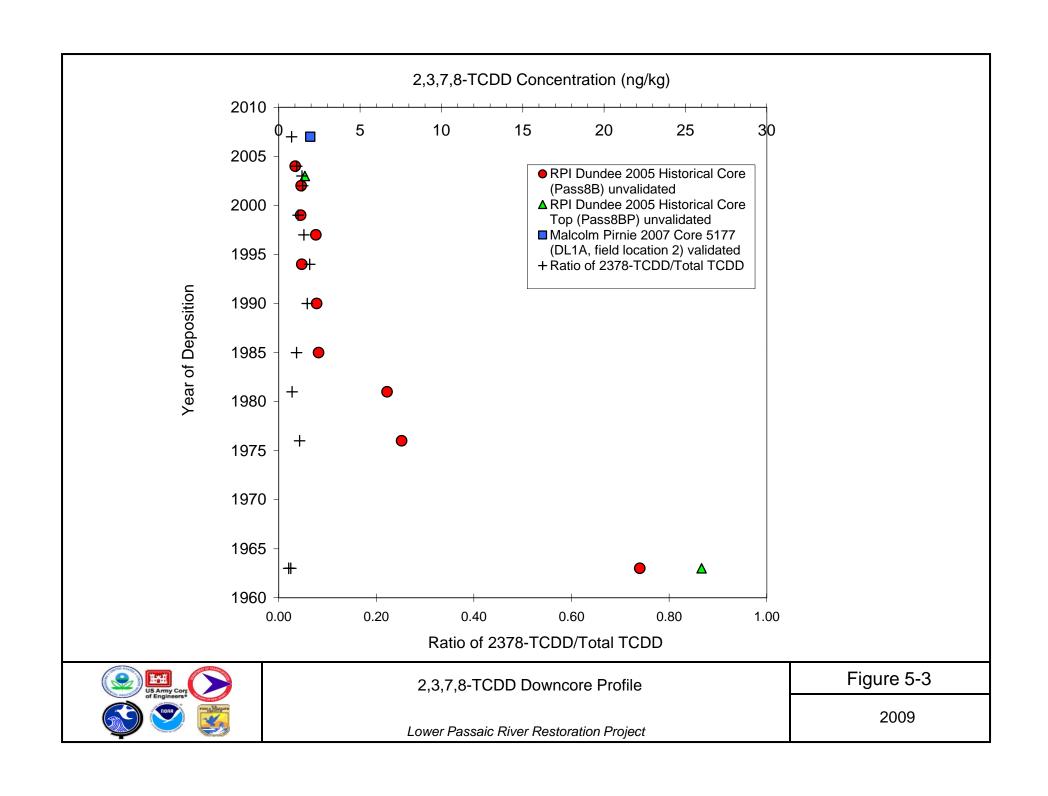


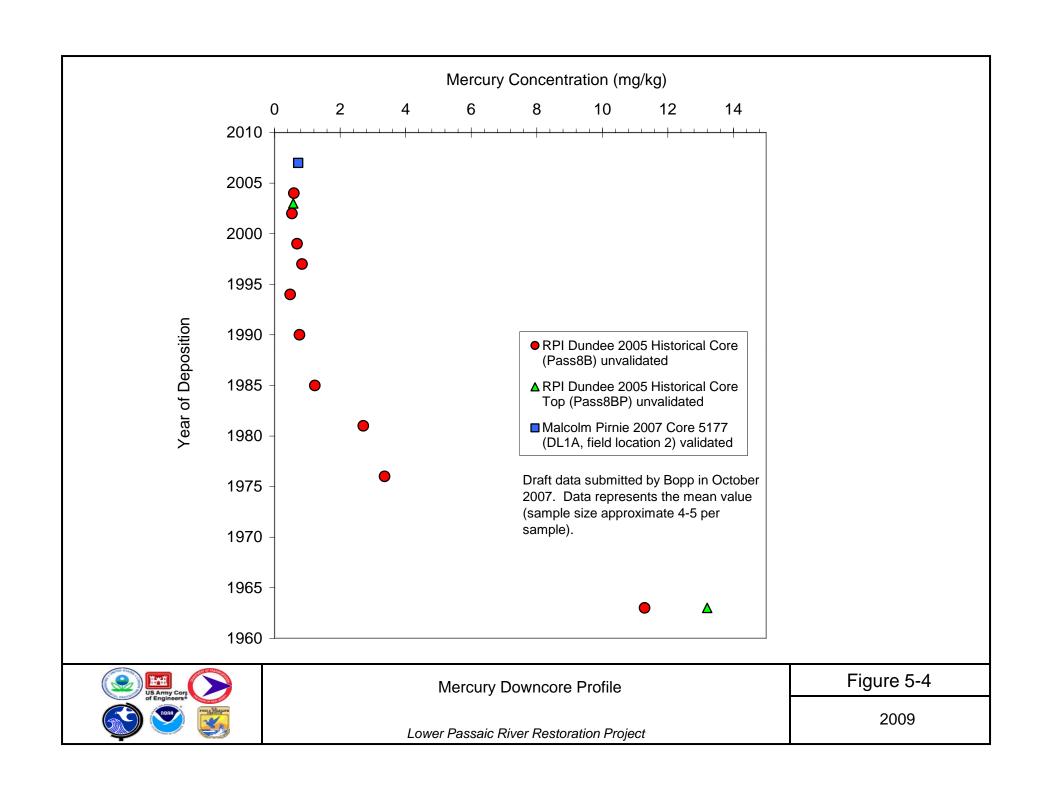


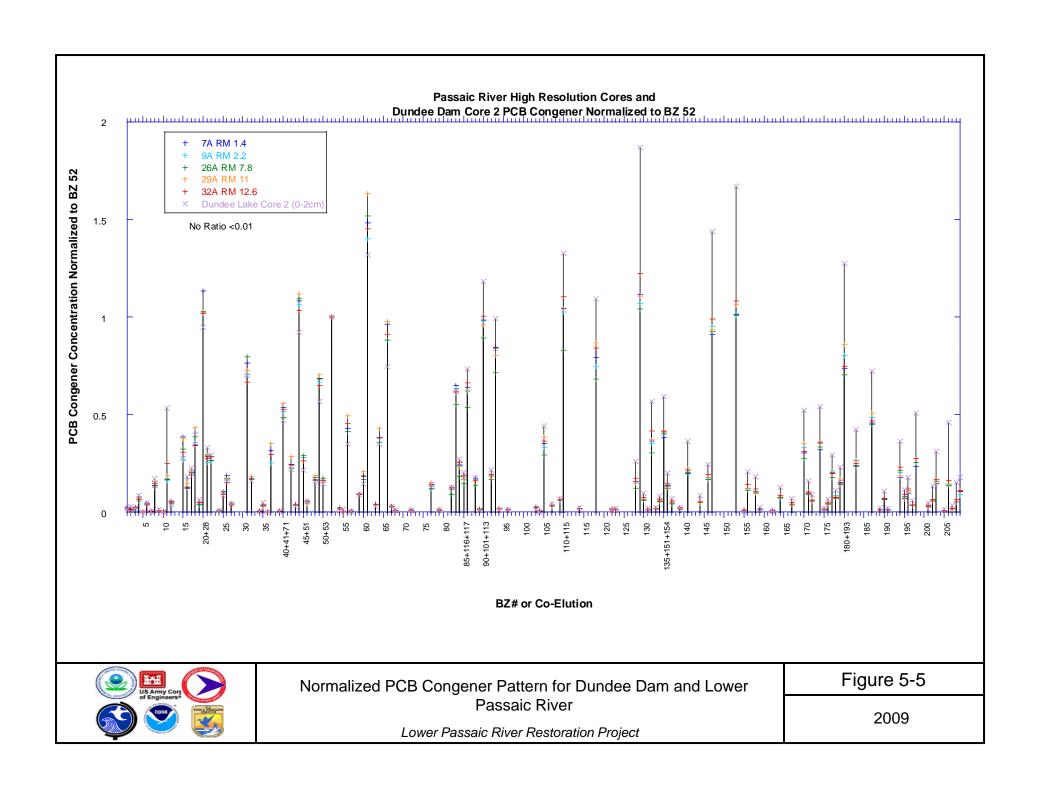






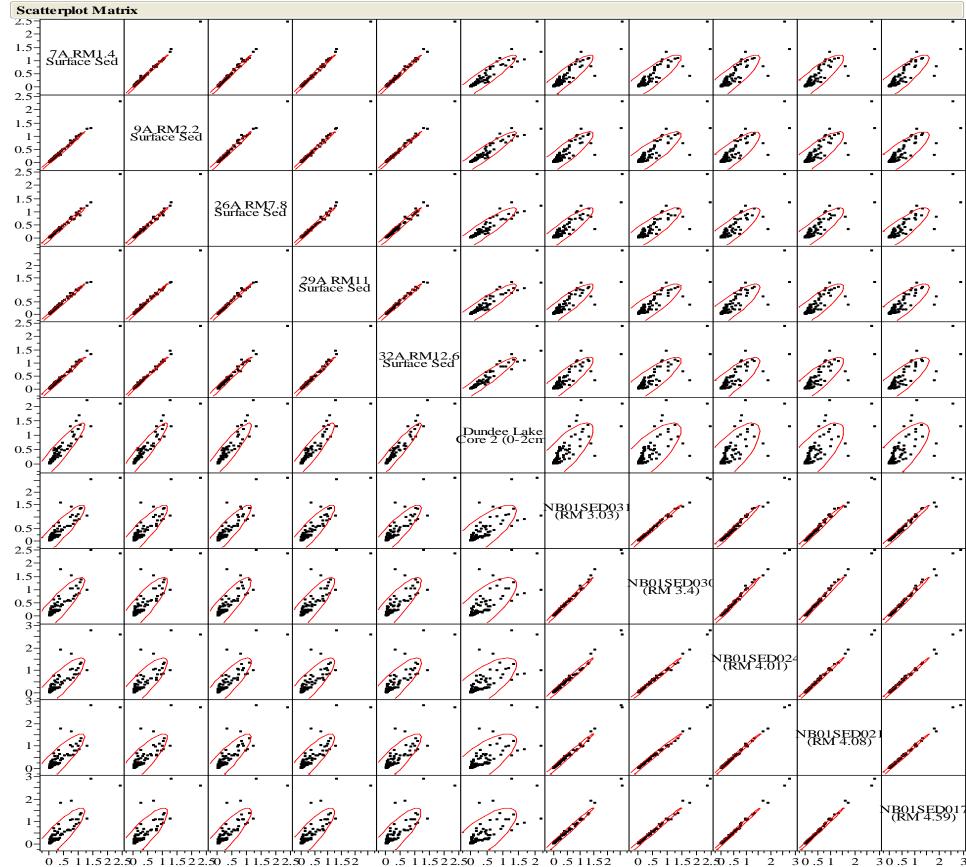






Multivariate Correlations

| | 7A RM1.4 Surface Sediment | 9A RM2.2 Surface Sediment | 26A RM7.8 Surface Sediment | 29A RM11 Surface Sediment | 32A RM12.6 Surface Sediment | Dundee Dam (0-2cm) | NB01SED03 1 (RM-3.0) | NB01SED03 0 (RM-3.4) | NB01SED02 4 (RM-4.0) | NB01SED02 1 (RM-4.1) | NB01SED01 7 (RM-4.6) |
|-----------------------------------|---------------------------------|---------------------------------|----------------------------------|---------------------------------|-----------------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 7A RM1.4 Surface Sediment | 1.0000 | 0.9979 | 0.9964 | 0.9973 | 0.9967 | 0.9348 | 0.9167 | 0.8917 | 0.8755 | 0.8862 | 0.8802 |
| 9A RM2.2 Surface Sediment | 0.9979 | 1.0000 | 0.9951 | 0.9968 | 0.9977 | 0.9467 | 0.8973 | 0.8710 | 0.8524 | 0.8629 | 0.8575 |
| 26A RM7.8 Surface Sediment | 0.9964 | 0.9951 | 1.0000 | 0.9962 | 0.9922 | 0.9291 | 0.9119 | 0.8873 | 0.8718 | 0.8845 | 0.8774 |
| 29A RM11 Surface Sediment | 0.9973 | 0.9968 | 0.9962 | 1.0000 | 0.9954 | 0.9346 | 0.9046 | 0.8787 | 0.8614 | 0.8731 | 0.8650 |
| 32A RM12.6 Surface Sediment | 0.9967 | 0.9977 | 0.9922 | 0.9954 | 1.0000 | 0.9555 | 0.8931 | 0.8658 | 0.8467 | 0.8573 | 0.8525 |
| Dundee Dam (0-2cm) | 0.9348 | 0.9467 | 0.9291 | 0.9346 | 0.9555 | 1.0000 | 0.8000 | 0.7711 | 0.7475 | 0.7531 | 0.7582 |
| NB01SED031 (RM-3.0) | 0.9167 | 0.8973 | 0.9119 | 0.9046 | 0.8931 | 0.8000 | 1.0000 | 0.9965 | 0.9943 | 0.9952 | 0.9938 |
| NB01SED030 (RM-3.4) | 0.8917 | 0.8710 | 0.8873 | 0.8787 | 0.8658 | 0.7711 | 0.9965 | 1.0000 | 0.9972 | 0.9961 | 0.9965 |
| NB01SED024 (RM-4.0) | 0.8755 | 0.8524 | 0.8718 | 0.8614 | 0.8467 | 0.7475 | 0.9943 | 0.9972 | 1.0000 | 0.9978 | 0.9980 |
| NB01SED021 (RM-4.1) | 0.8862 | 0.8629 | 0.8845 | 0.8731 | 0.8573 | 0.7531 | 0.9952 | 0.9961 | 0.9978 | 1.0000 | 0.9976 |
| NB01SED017 (RM-4.6) | 0.8802 | 0.8575 | 0.8774 | 0.8650 | 0.8525 | 0.7582 | 0.9938 | 0.9965 | 0.9980 | 0.9976 | 1.0000 |



Notes:

- 1. In this presentation, river miles for the Newark Bay sampling locations are assigned with respect to the distance from the mouth of the Lower Passaic River (RM0.0) and following the federal navigation channel.
- 2. PCB Congeners Concentration Normalized to Congener 52

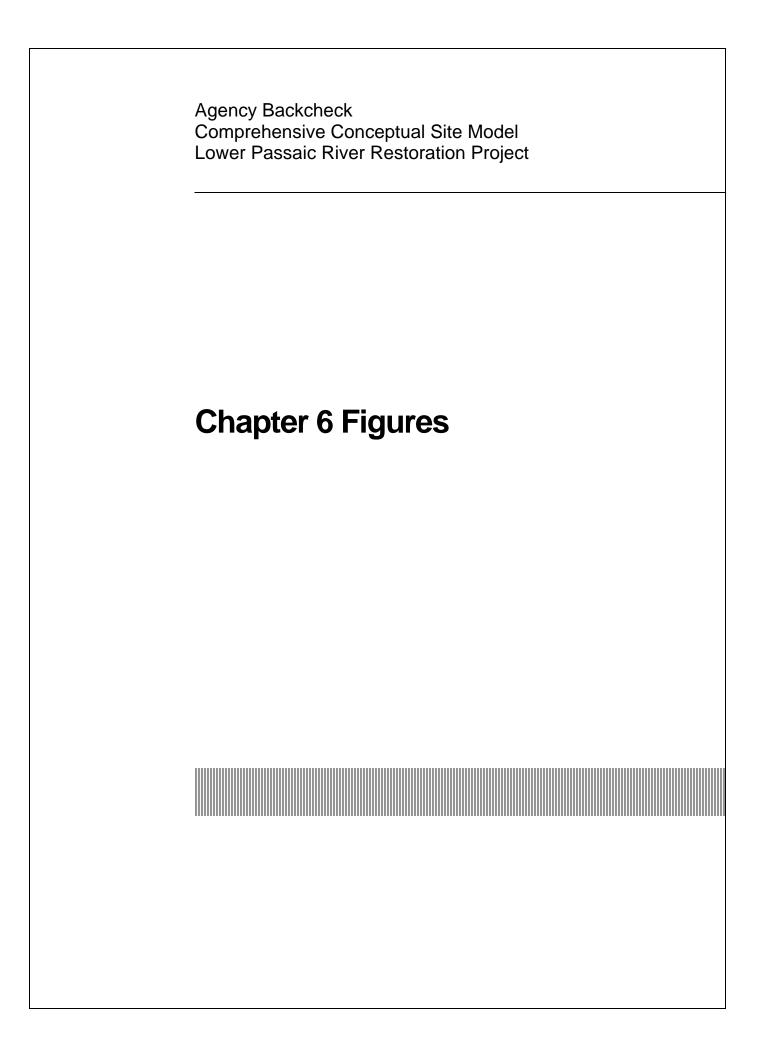


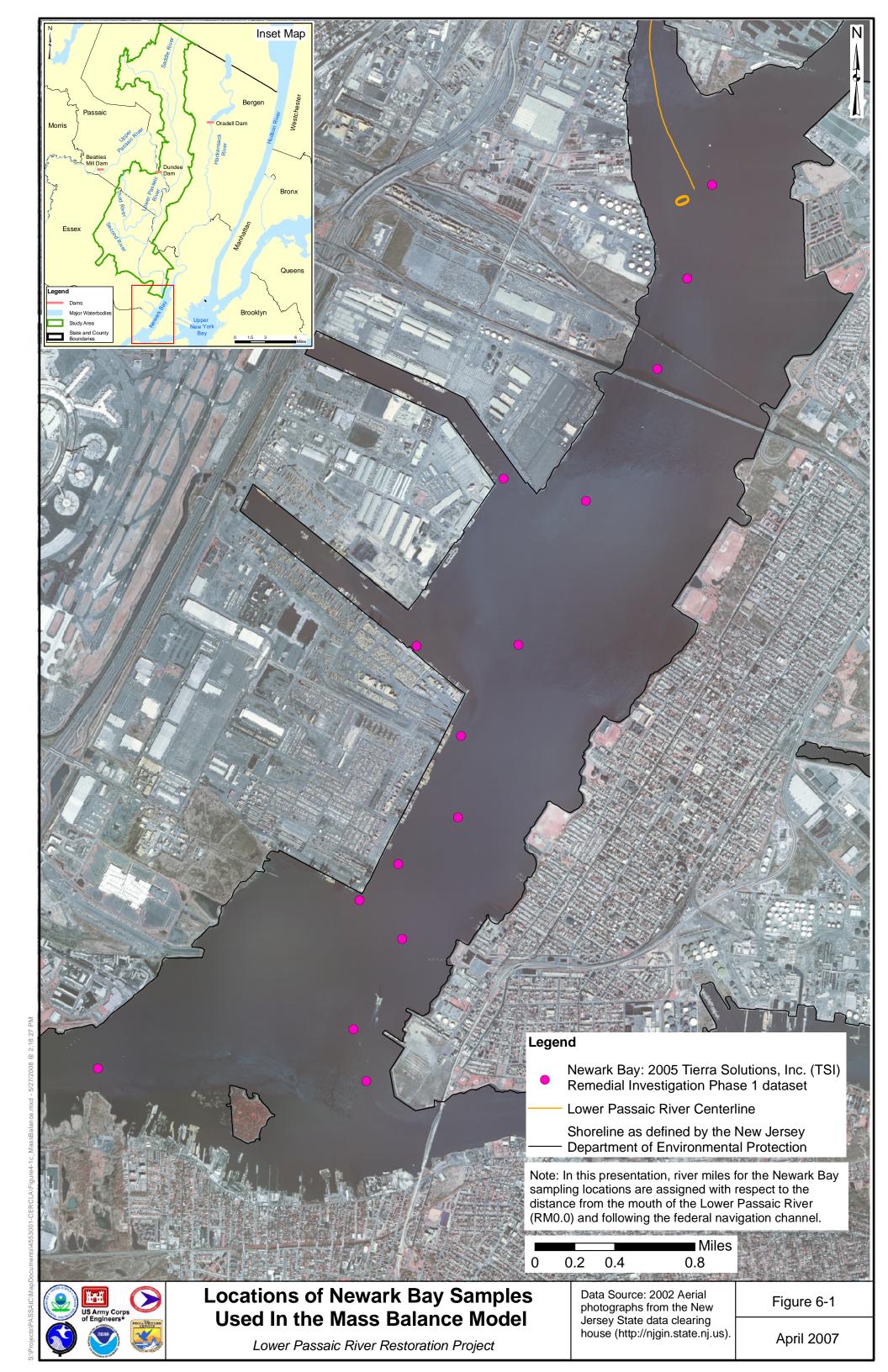


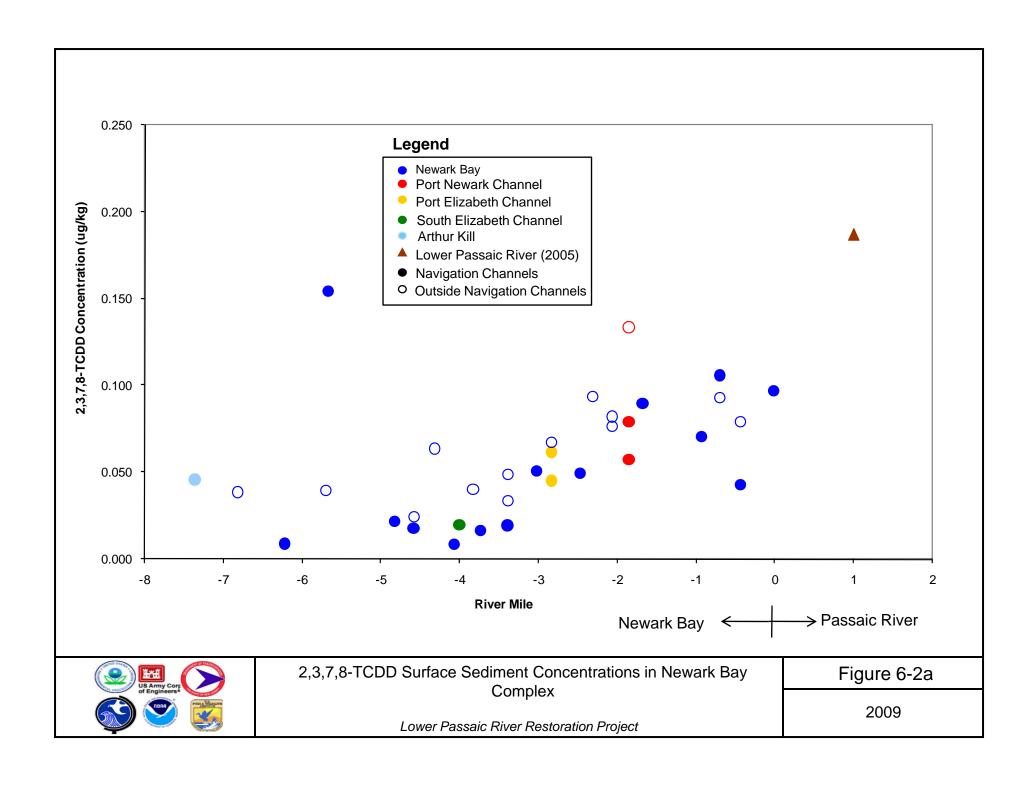


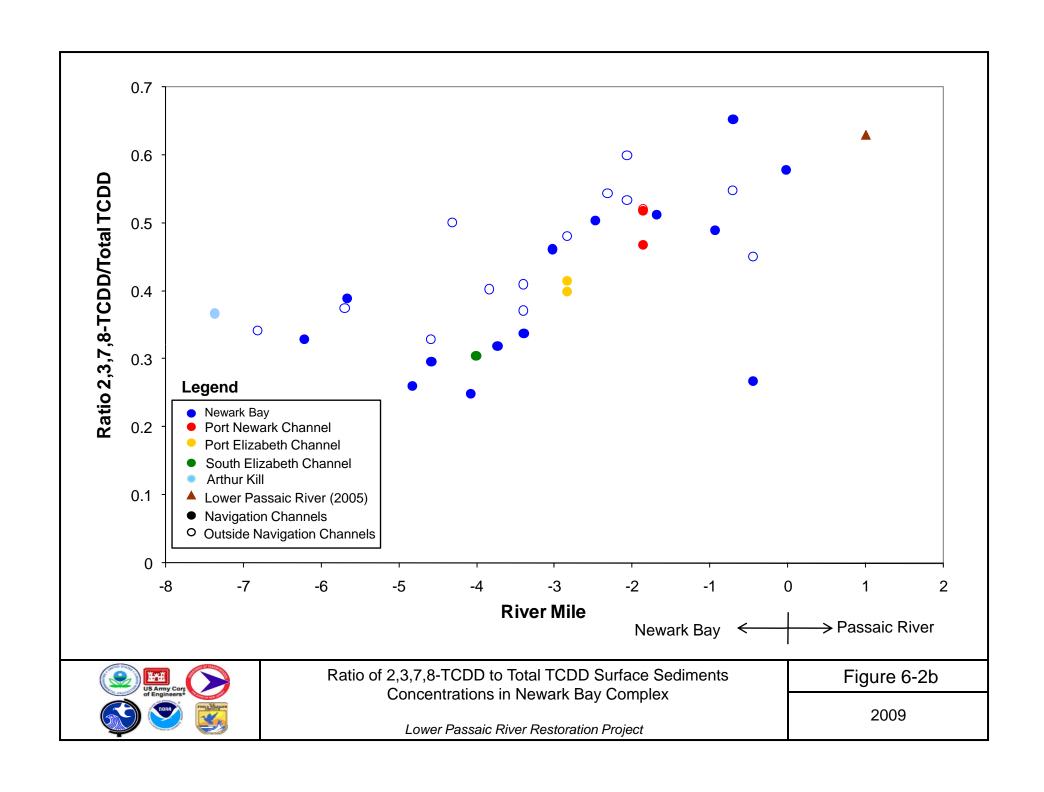
Correlation Among Sampling Locations for PCB Congeners in Dundee Dam, Lower Passaic River, and Newark Bay Surface Sediment

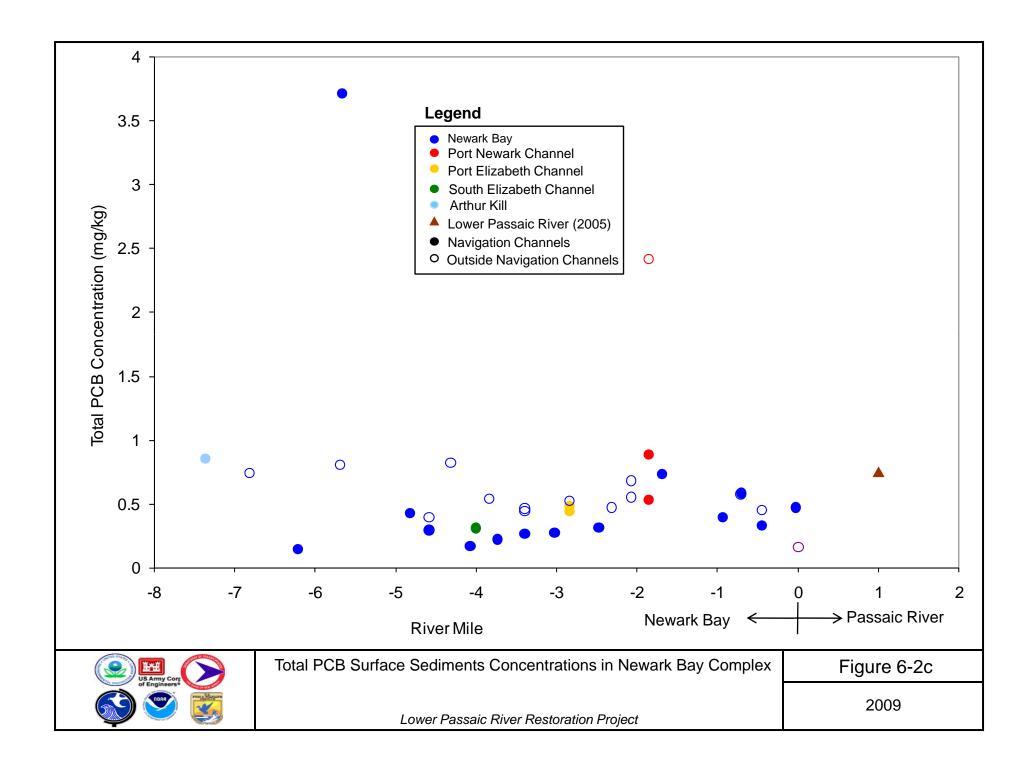
Figure 5-6

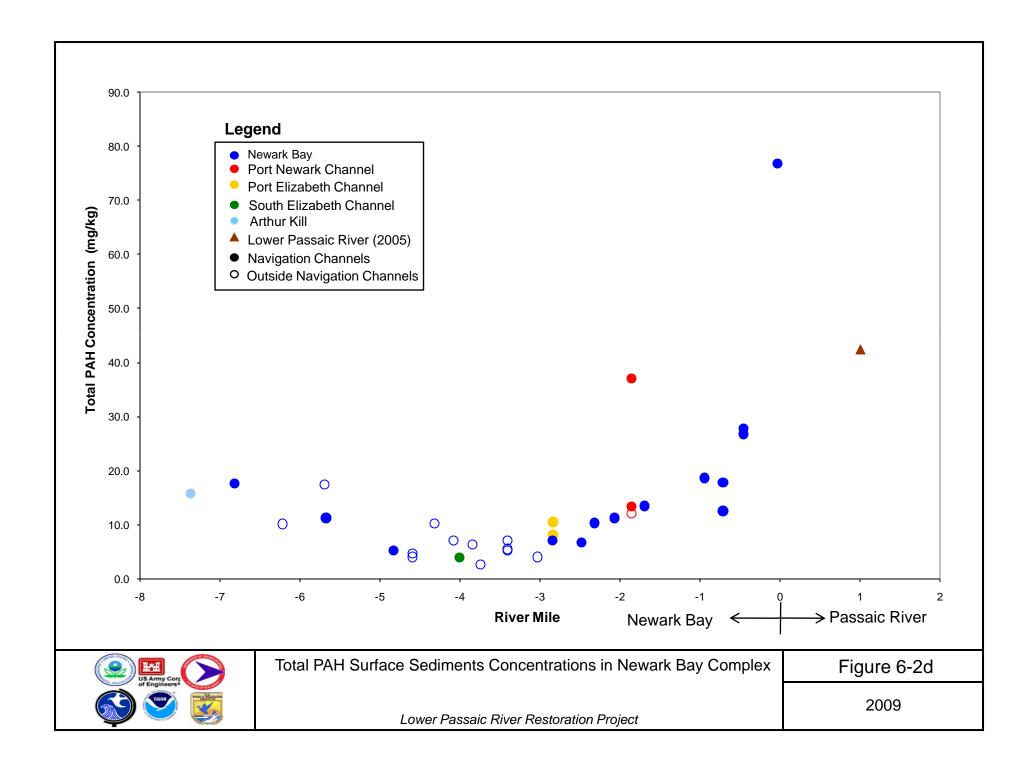


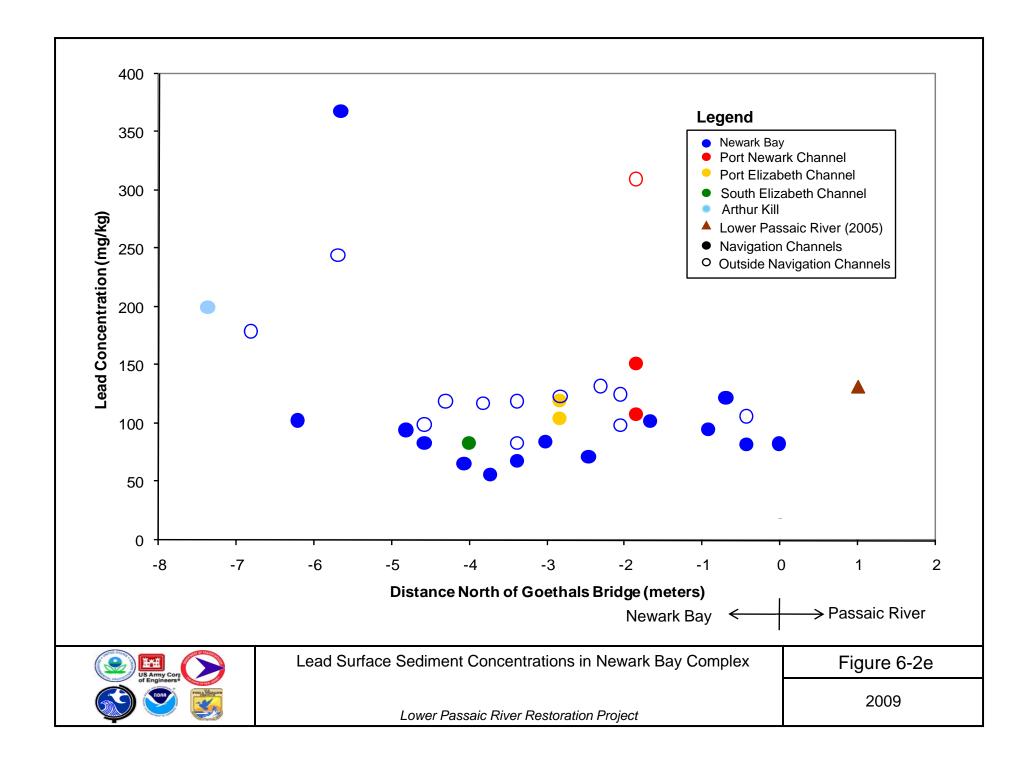


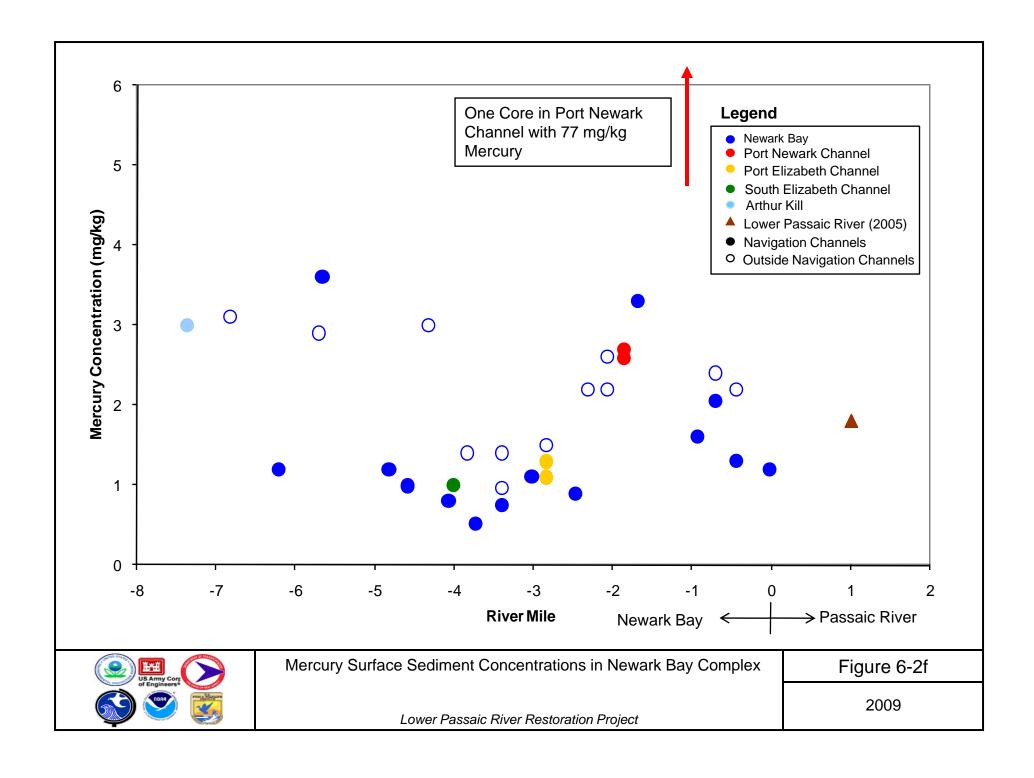








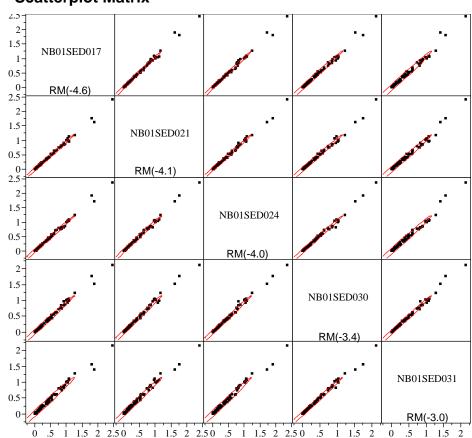




Multivariate Correlations

| | NB01SED017 RM(-4.6) | NB01SED021 RM(-4.1) | NB01SED024 RM(-4.0) | NB01SED030 RM(-3.4) | NB01SED031 RM(-3.0) |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| NB01SED017 RM(-4.6) | 1.0000 | 0.9978 | 0.9976 | 0.9961 | 0.9931 |
| NB01SED021 RM(-4.1) | 0.9978 | 1.0000 | 0.9976 | 0.9962 | 0.9941 |
| NB01SED024 RM(-4.0) | 0.9976 | 0.9976 | 1.0000 | 0.9969 | 0.9934 |
| NB01SED030 RM(-3.4) | 0.9961 | 0.9962 | 0.9969 | 1.0000 | 0.9964 |
| NB01SED031 (-3.0) | 0.9931 | 0.9941 | 0.9934 | 0.9964 | 1.0000 |

Scatterplot Matrix



Legend

PCB Congeners
 Concentration
 Normalized to
 Congener 52

Notes

In this presentation, river miles for the Newark Bay sampling locations are assigned with respect to the distance from the mouth of the Lower Passaic River (RM0.0) and following the federal navigation channel.

Data Source: 2005 Tierra Solutions, Inc. (TSI) Remedial Investigation Phase 1 dataset



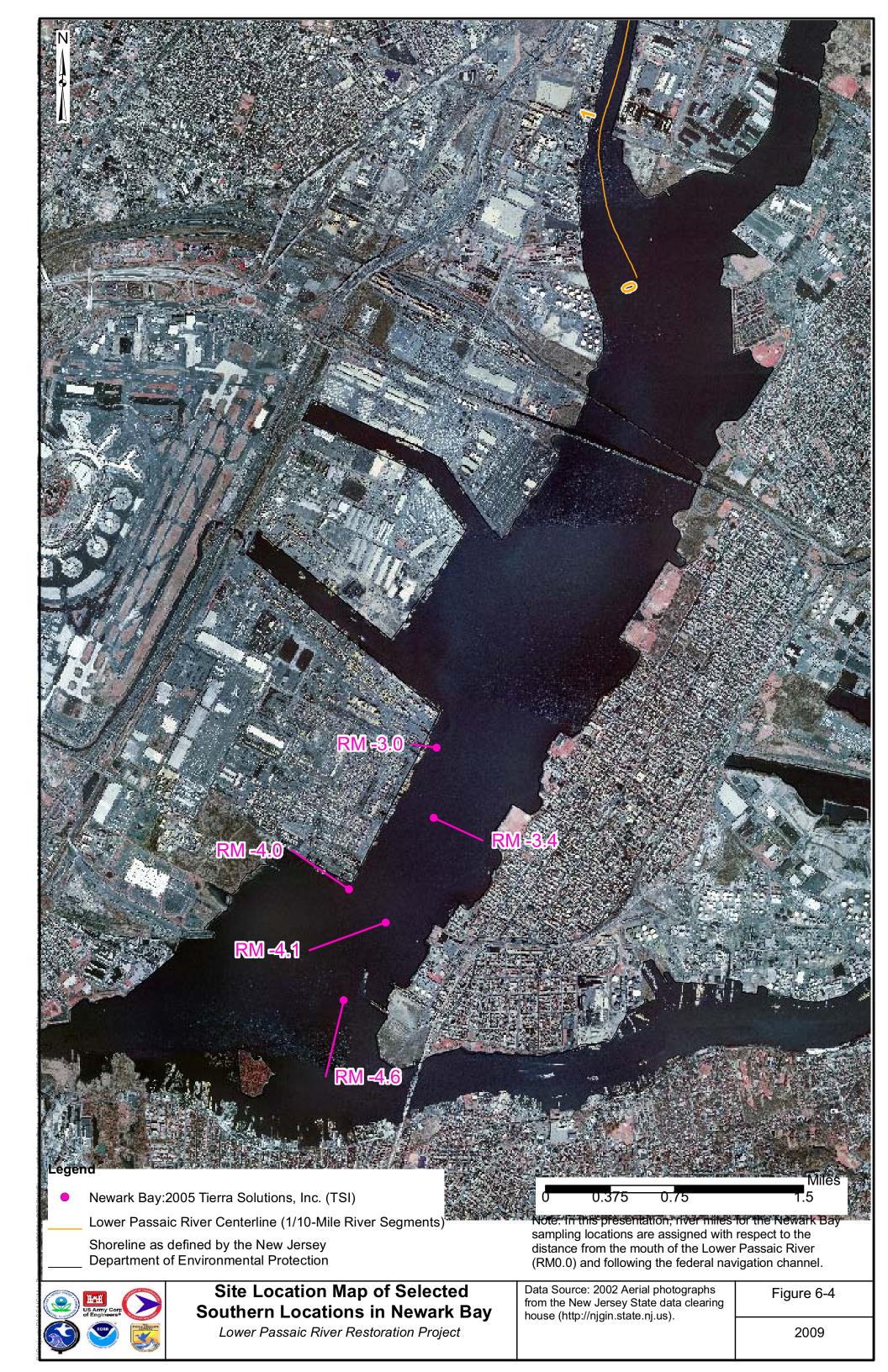


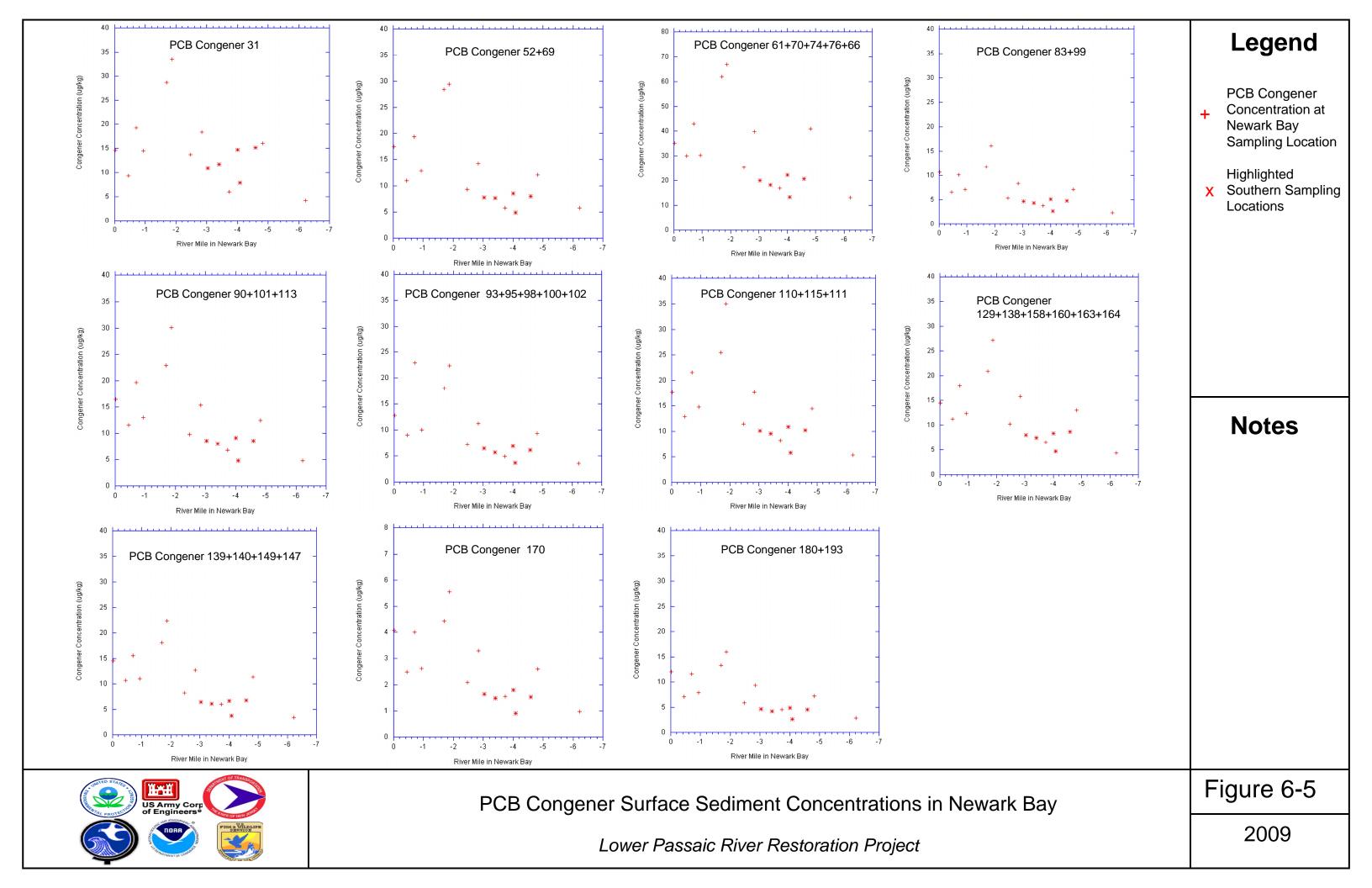


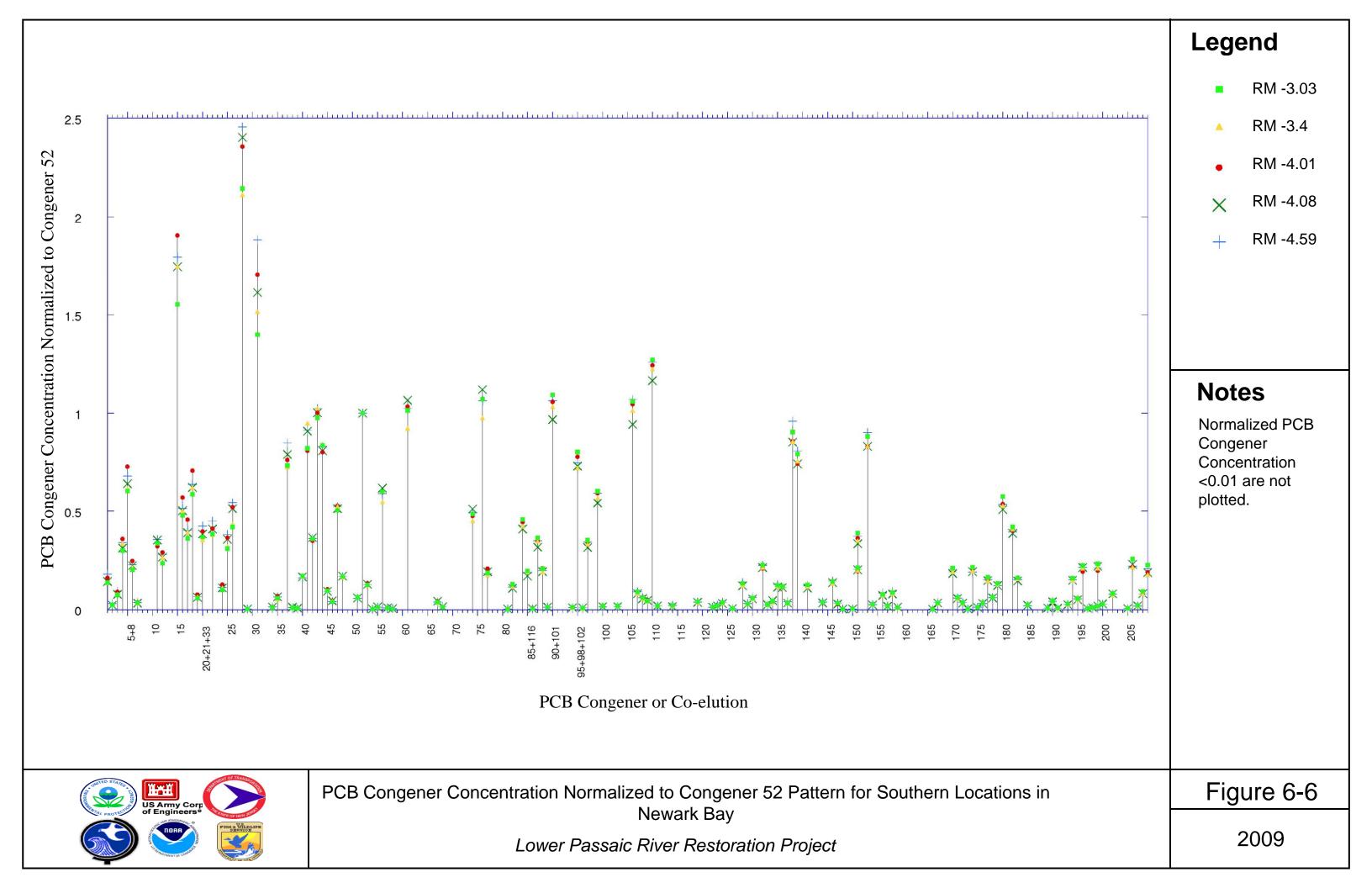
Correlation Among the Sampling Locations of PCB Congeners in Southern Newark Bay Samples

Lower Passaic River Restoration Project

Figure 6-3







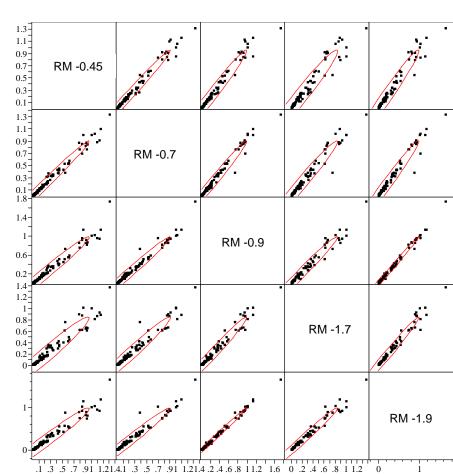
Multivariate Correlations

| | NB01SED061 (RM-0.45) | NB01SED052 (RM-0.71) | NB01SED055 (RM-0.94) | NB01SED046 (RM-1.7) | NB01SED047 (RM-1.9) |
|----------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|
| NB01SED061 (RM-0.45) | 1.0000 | 0.9906 | 0.9830 | 0.9704 | 0.9778 |
| NB01SED052 (RM-0.71) | 0.9906 | 1.0000 | 0.9882 | 0.9796 | 0.9831 |
| NB01SED055 (RM-0.94) | 0.9830 | 0.9882 | 1.0000 | 0.9852 | 0.9967 |
| NB01SED046 (RM-1.7) | 0.9704 | 0.9796 | 0.9852 | 1.0000 | 0.9880 |
| NB01SED047 (RM-1.9) | 0.9778 | 0.9831 | 0.9967 | 0.9880 | 1.0000 |

Legend

PCB Congeners **Concentration Normalized** to Congener 52

Scatterplot Matrix



Notes

In this presentation, river miles for the Newark Bay sampling locations are assigned with respect to the distance from the mouth of the Lower Passaic River (RM0.0) and following the federal navigation channel.

Data Source: 2005 Tierra Solutions, Inc. (TSI) Remedial Investigation Phase 1 dataset.









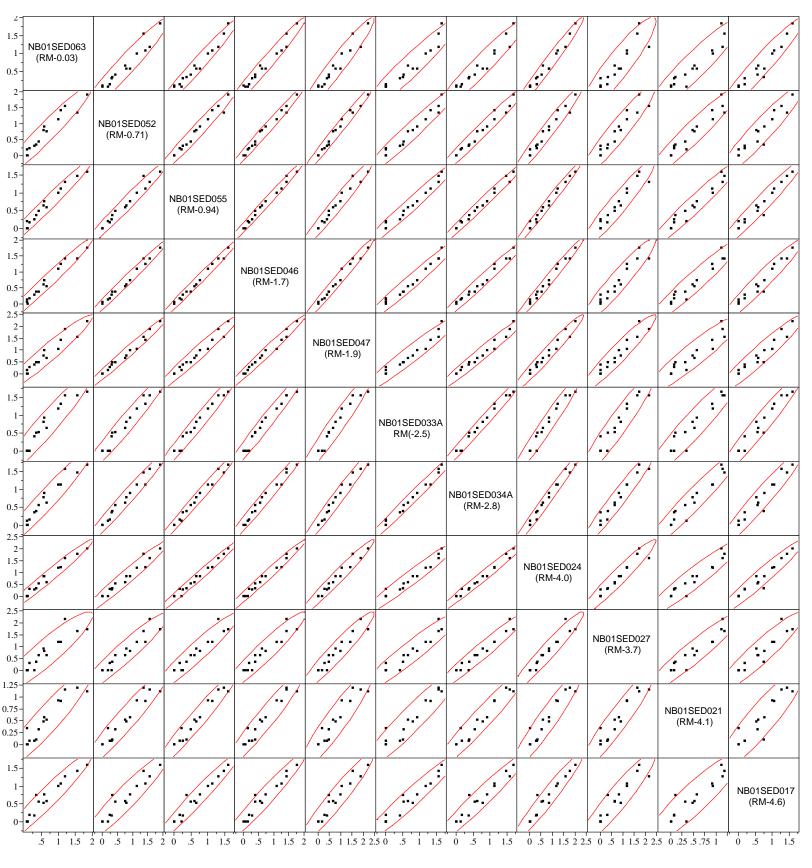
Correlation Among Sampling Locations of PCB Congeners Concentration Normalized to Congener 52 in Northern Newark Bay Samples

Lower Passaic River Restoration Project

Figure 6-7

| Multivariate Correlations | | | | | | | | | | | |
|---------------------------|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-----------------------|
| | NB01SED06 3 (RM-0.03) | NB01SED05 2 (RM-0.71) | NB01SED05 5 (RM-0.94) | NB01SED04 6 (RM-1.7) | NB01SED04 7 (RM-1.9) | NB01SED03 3A RM(-2.5) | NB01SED03 4A (RM-2.8) | NB01SED02 4 (RM-4.0) | NB01SED02 7 (RM-3.7) | NB01SED02 1 (RM-4.1) | NB01SED0 7 (RM-4.6 |
| NB01SED063 (RM-0.03) | 1.0000 | 0.9625 | 0.9811 | 0.9820 | 0.9627 | 0.9565 | 0.9634 | 0.9823 | 0.9171 | 0.9360 | 0.959 |
| NB01SED052 (RM-0.71) | 0.9625 | 1.0000 | 0.9823 | 0.9899 | 0.9877 | 0.9740 | 0.9831 | 0.9752 | 0.9485 | 0.9570 | 0.947 |
| NB01SED055 (RM-0.94) | 0.9811 | 0.9823 | 1.0000 | 0.9923 | 0.9780 | 0.9831 | 0.9904 | 0.9903 | 0.9536 | 0.9716 | 0.972 |
| NB01SED046 (RM-1.7) | 0.9820 | 0.9899 | 0.9923 | 1.0000 | 0.9875 | 0.9812 | 0.9866 | 0.9872 | 0.9508 | 0.9615 | 0.967 |
| NB01SED047 (RM-1.9) | 0.9627 | 0.9877 | 0.9780 | 0.9875 | 1.0000 | 0.9673 | 0.9821 | 0.9771 | 0.9534 | 0.9349 | 0.956 |
| NB01SED033 A RM(-2.5) | 0.9565 | 0.9740 | 0.9831 | 0.9812 | 0.9673 | 1.0000 | 0.9904 | 0.9747 | 0.9505 | 0.9479 | 0.968 |
| NB01SED034 A (RM-2.8) | 0.9634 | 0.9831 | 0.9904 | 0.9866 | 0.9821 | 0.9904 | 1.0000 | 0.9880 | 0.9708 | 0.9612 | 0.965 |
| NB01SED024 (RM-4.0) | 0.9823 | 0.9752 | 0.9903 | 0.9872 | 0.9771 | 0.9747 | 0.9880 | 1.0000 | 0.9625 | 0.9490 | 0.966 |
| NB01SED027 (RM-3.7) | 0.9171 | 0.9485 | 0.9536 | 0.9508 | 0.9534 | 0.9505 | 0.9708 | 0.9625 | 1.0000 | 0.9450 | 0.934 |
| NB01SED021 (RM-4.1) | 0.9360 | 0.9570 | 0.9716 | 0.9615 | 0.9349 | 0.9479 | 0.9612 | 0.9490 | 0.9450 | 1.0000 | 0.912 |
| NB01SED01 7 (RM-4.6) | 0.9594 | 0.9474 | 0.9725 | 0.9678 | 0.9562 | 0.9685 | 0.9651 | 0.9663 | 0.9345 | 0.9128 | 1.000 |

Scatterplot Matrix



Legend

PAH Compounds Normalized to Dieldrin

Notes

PAH Compounds normalized to dieldrin.

In this presentation, river miles for the Newark Bay sampling locations are assigned with respect to the distance from the mouth of the Lower Passaic River (RM0.0) and following the federal navigation channel.

Data Source:2005 Tierra Solutions, Inc. (TSI) Remedial Investigation Phase 1 dataset.



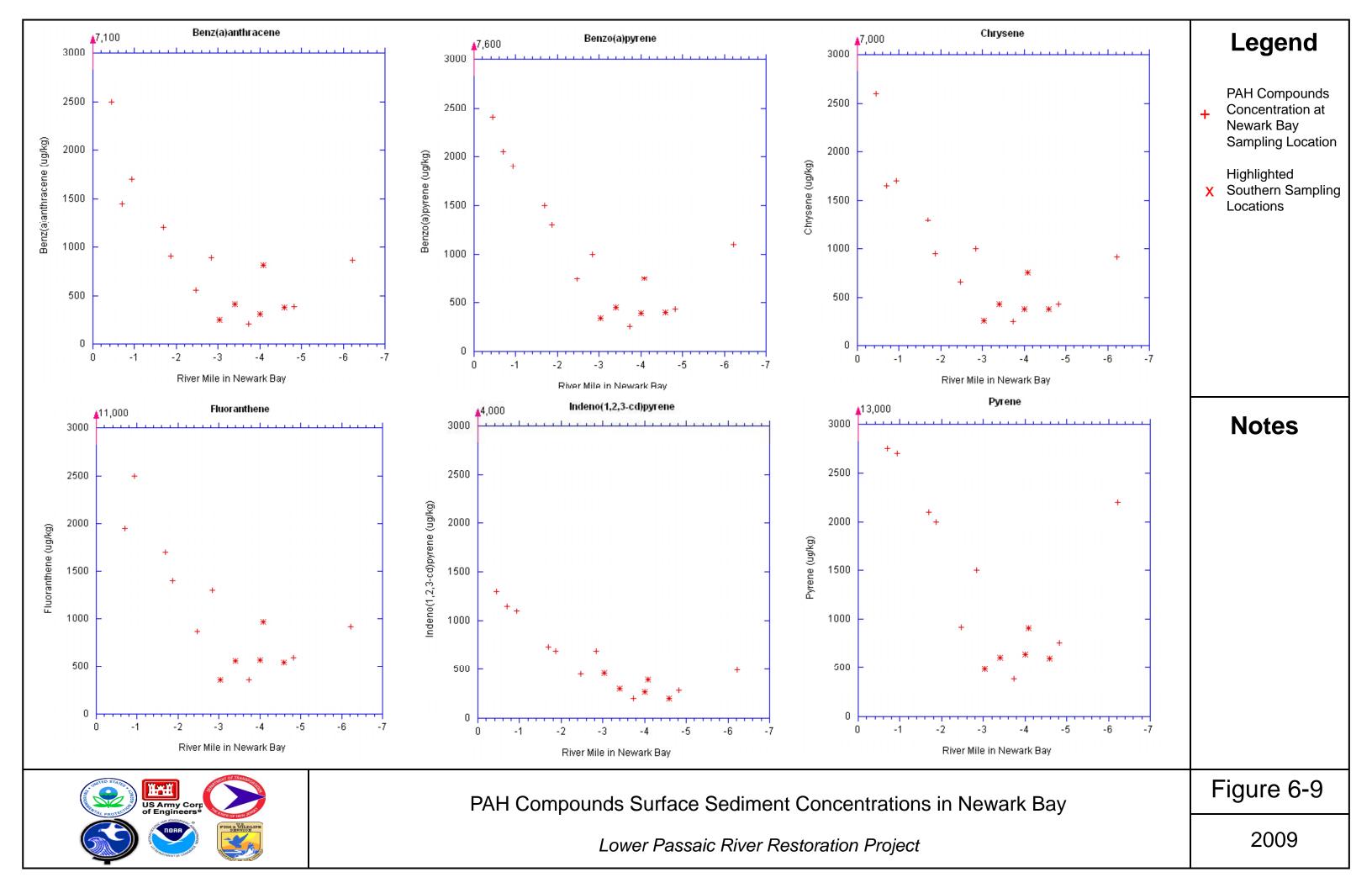


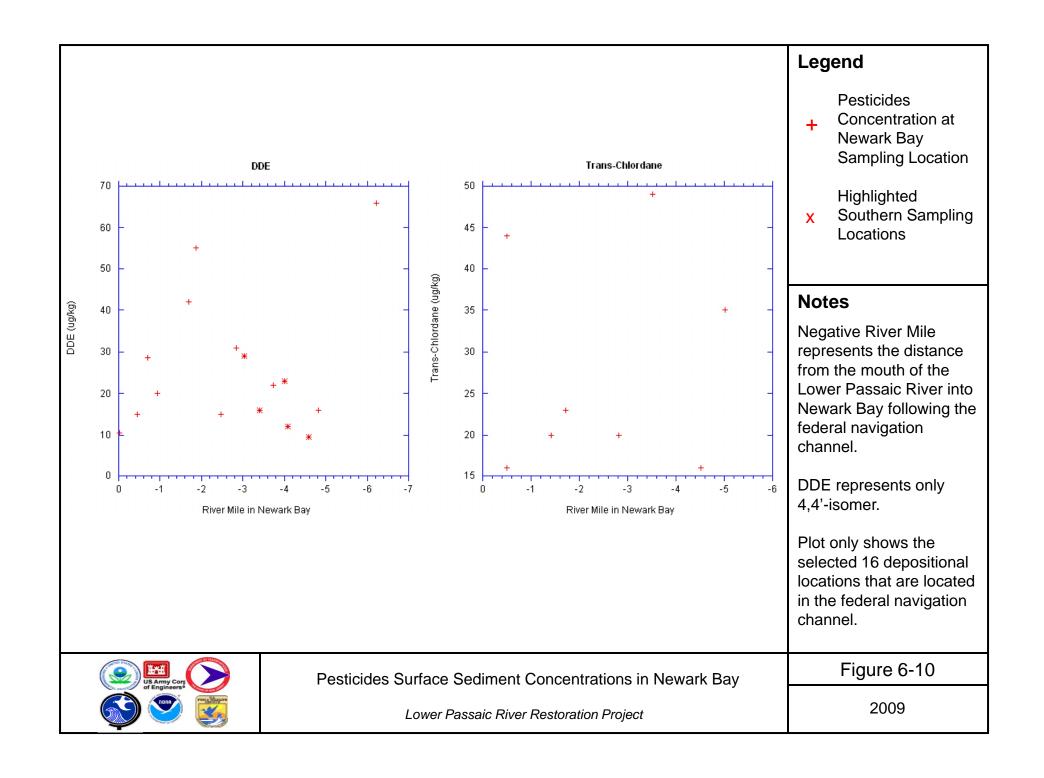


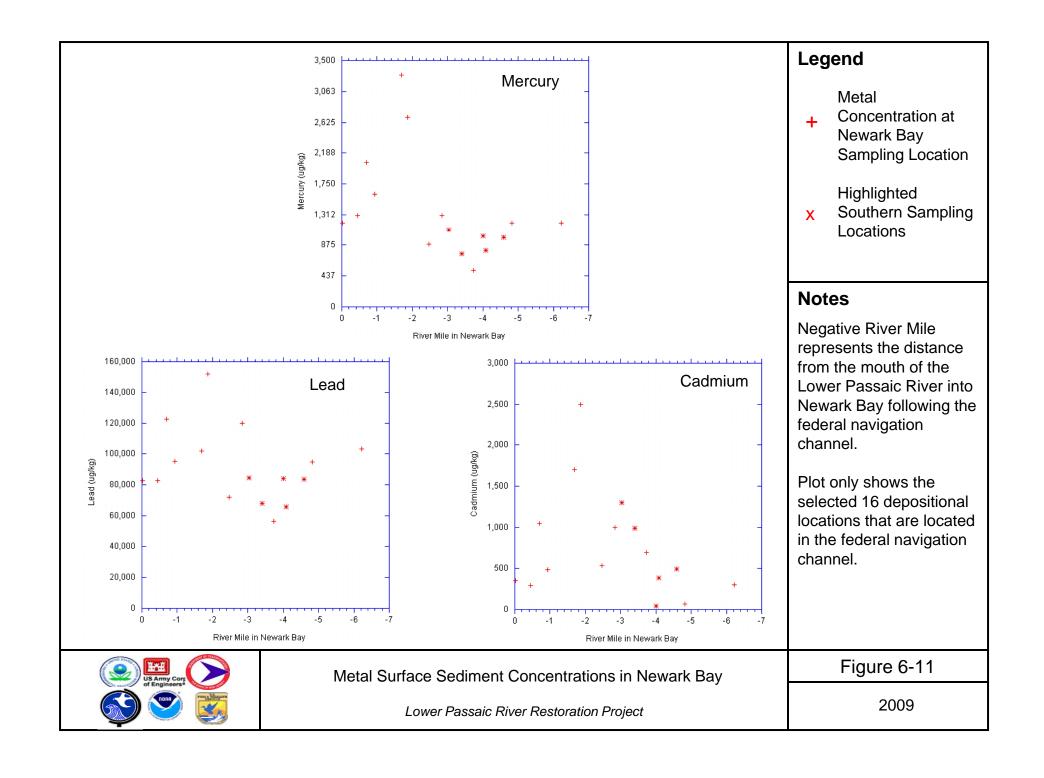


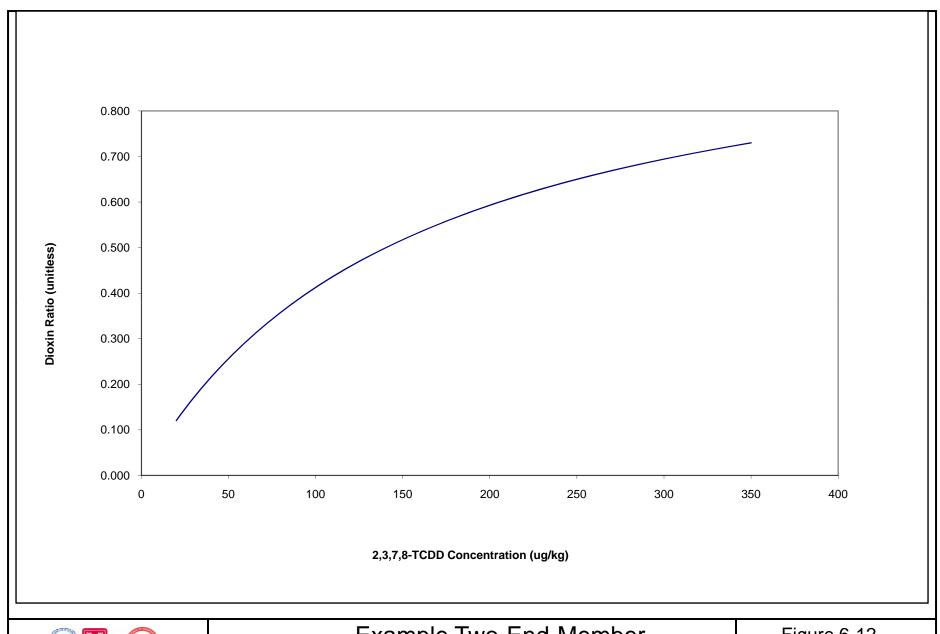
Lower Passaic River Restoration Project

Figure 6-8







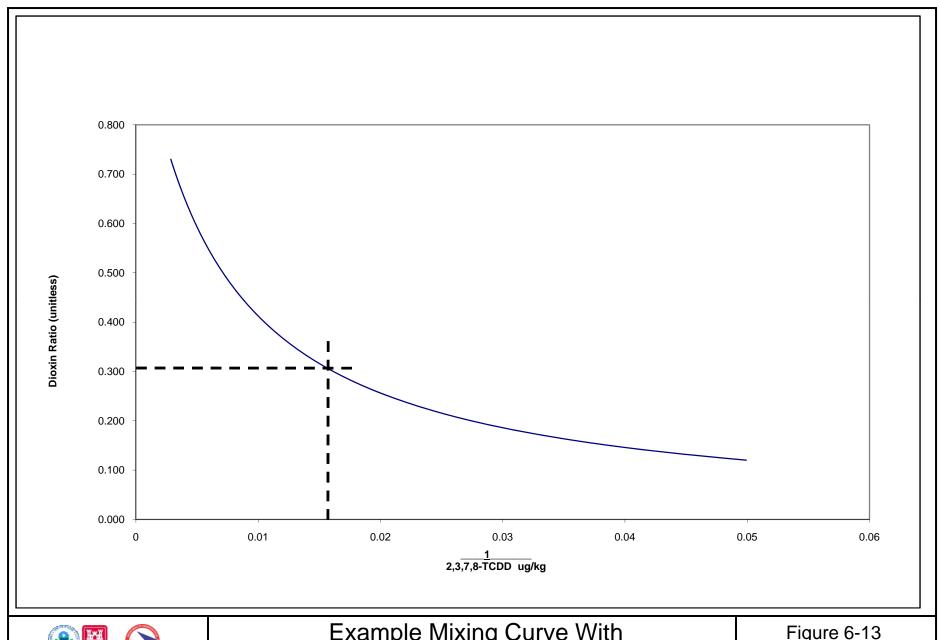




Example Two-End-Member Mixing Curve

Lower Passaic River Restoration Project

Figure 6-12





Example Mixing Curve With Reciprocal Concentration

Lower Passaic River Restoration Project

Figure 6-13

